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MINERALOGICAL ABSTRACTS

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Arising from a decision taken at the meeting of the INTERNATIONAL MINERALOGICAL ASSOCIATION in penhagen in 1961 the Mineralogical Societies of America and Great Britain agreed to issue a joint statement to National cieties adhering to the Association inviting each Society to organize contributions of abstracts of papers published in e journals of its country on subjects relevant to *Mineralogical Abstracts*. This invitation was issued and has brought a atifying response. Members of Societies which have agreed to co-operate in this way are entitled to receive *Mineralogical stracts* for their personal use at a reduced rate of subscription in application *which must be made through their National ciety*. The countries now co-operating include : AUSTRALIA, AUSTRIA, BELGIUM, BULGARIA, CANADA, CZECHOSLOVAKIA, ENMARK, EGYPT, FINLAND, GERMANY, INDIA, ISRAEL, ITALY, JAPAN, NETHERLANDS, NEW ZEALAND, NORWAY, PAKISTAN, RTUGAL, SPAIN, SWEDEN, SWITZERLAND. Individual mineralogists and petrologists in countries not represented in the sociation, or not yet co-operating through their National Society, provide abstracts from the literature of ARGENTINA, AZIL, KENYA, MEXICO, and SOUTH AFRICA.

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ERRATA

Mineralogical Abstracts, vol. 20

Abstract number	
69-67	*for* Weber *read* Webber
69-562	*for* Grammont *read* Gramont
69-646	*for* Duplais *read* Duplaix
69-682	line 7 for *c* read $\bar{c}$
69-937	*for* Rimier *read* Rimer
69-1325	*for* Bishofite *read* Bischofite
69-1420	*for* Capdevilla *read* Capdevila
69-1599	for *Poulo Concorde* read *Poulo Condore*
69-1650	*for* McConnel *read* McConnell
69-1673	line 11 *for* its *read* is
69-1877	*for* MacCarthy *read* McCarthy
69-2382	*for* Picot, R. *read* Picot, P.
69-2438	citation *add* 1967
69-2890	*for* henritemiérite *read* henritermiérite
69-3138	*for* Lovering, J. P. *read* Lovering, J. F.
69-3267	for *Valence* read *Velence* *for* Current Sci., 36, 678 *read* Current Sci., 36, 578
69-3388	line 9 *for* haiiyne *read* haüyne

In no. 1, March, Author Index delete 69-453 under Černý

ABBREVIATIONS USED IN REFERENCE TO PUBLICATIONS

hdl.	Abhandlungen
str.	Abstract,-s
t.	Abteilung
ad., Accad., Akad.	Academy, & *equiv.*
v.	Advancement
ric.	Agricultur-al, -e
al.	Analy-st,-tical, &c.
n., An.	Annals, Anales, & *equiv.*
org.	Anorganisch
pl.	Applied
ch.	Archives
c., Assoc.	Association, & *equiv.*
tron.	Astronomical
.	Band
itr.	Beiträge
r.	Bericht-e
rg.	Bergwesen
l., Boll., Bull.	Bulletin, & *equiv.*
r.	Bureau
am.	Ceramic, & *equiv.*
em., Chim.	Chemi-cal,-stry, & *equiv.*
n.	Ciencia,-s
c.	Circular
	Classe
n.	Comisión
mm.	Commission
nf.	Conference, & *equiv.*
ngr.	Congress, & *equiv.*
ntr.	Contributions
t.	Comptes Rendus
st., Cryst.	Crystallograph-ical,-y & *equiv.*
pt.	Department, & *equiv.*
s.	Dissertation
vn.	Division
kl.	Doklady=C.R.
on.	Economic
uc.	Education
g.	Engineering
ped.	Expedition
per.	Experimental
pl.	Exploration
c.	Faculty
(s).	Figure(s)
.	Fisicale, fisico
ren.	Föreningen
rh.	Förhandlinger
rtsch.	Fortschritt,-e
n.	General
ol., géol.	Geolog-y, -ical, -ist, & *equiv.*
sell.	Gesellschaft
o-chem., him.	Geochemi-cal, -stry, &c.
ogr.	Geograph-y, ical, &c.
Geophys., geofis.	Geophysic-al, -s, &c.
Govt.	Government
Hdbh.	Handbuch
Illustr.	Illustrat-ed, -ions
Imp.	Imperial
Industr.	Industr-ial, -y
Inform.	Information
Inst.	Institute, institution, & *equiv.*
Instr.	Instruments
Int.	Interior
Intern.	International
Invest.	Investigations
Issl.	Issledovaniye=investigation
Ist.	Istituto
Izd.	Izdanie=publication
Izvest.	Izvestiya
Jahresb.	Jahresbericht
Jahrb.	Jahrbuch
Jorn., Journ.	Journal, & *equiv.*
Khim.	Khim-ie, &c.
Kl.	Klasse
Krist.	Kristallographie, &c.
Lab.	Laboratory
Lit.	Literary
Mag.	Magazine
Mat., Math.	Mathematical, & *equiv.*
Medd.	Meddelelser
Mem., Mem.	Memoir, -s, & *equiv.*
Metall.	Metallurg-ical, -y
Min.	Mineralog-ical, ist, -y
Misc.	Miscellaneous
Mitt.	Mitteilungen
Mh.	Monatsheft
Mus., Muz.	Museum, & *equiv.*
Nac., Nat. Naz.	National, & *equiv.*
Natur.	Natur-al, -alist, & *equiv.*
Natur-w, -v	Naturwissenschaft, & *equiv.*
Obraz.	Obrazovanie=education
Obshch.	Obshchestva=society
Petr.	Petrolog-ical, -y, & *equiv.*
Petrol.	Petroleum
Phil.	Philosophical, &c.
Photos.	Photographs.
Photomicros.	Photomicrographs
Phys.	Physic-al, -s, & *equiv.*
Pl(s).	Plate(s)
Polytech.	Polytechnic, & *equiv.*
Pract., Prakt.	Practical, & *equiv.*
Proc.	Proceedings
Prof.	Professional
Prosp.	Prospecting
Publ.	Publication(s), published
Rasv.	Razvedka=survey
Rec.	Records
Ref.	References, referata
Rend.	Rendiconti
Repb.	Republic
Rept.	Report(s)
Res.	Research
Reserv.	Reserves
Resrcs.	Resources
Rdsch.	Rundschau
Rev.	Review
Roy.	Royal, & *equiv.*
Sborn.	Sbornik=magazine
Sch.	School, Schule
Sci.	Science
Sect.	Section
Sedim.	Sedimentary
Ser., ser.	Series, & *equiv.*
Serv.	Service
Sitzb.	Sitzungsbericht
Skr.	Skrift, -en, -er
Soc.	Society, & *equiv.*
Sondbd.	Sonderband
Spec., spez.	Special, & *equiv.*
Stand.	Standard(s)
Stn.	Station
Suppl.	Supplement
Surv.	Survey, -or
Symp.	Symposium
Tab(s).	Table(s), tabellen
Techn.	Technolog-ical, -y
Tids(s)kr.	Tids(s)krift, -en
Tijdschr.	Tijdschrift
Trab.	Trabajos
Trans.	Transactions
Transl.	Translat-ed, -ion
U.A.R.	United Arab Republic
Uch.	Uchennye=learned
Ucheb.	Uchebnyi=teaching
Unders.	Undersögelse, undersökning
Univ.	University, & *equiv.*
Verhdl.	Verhandlungen
Vidensk.	Videnskaps
Volc., Vulk.	Volcanolog-ical, -y, &c.
Vses.	Vsesoyuznyi=All-Union
Vyssh.	Vysshikh=higher
Wiss.	Wissenschaft
Zap.	Zapiski=memoirs
Zav.	Zavodskaya=factory
Zaved.	Zavedenii=institution
Zeits.	Zeitschrift
Zhurn.	Zhurnal=journal
Ztg.	Zeitung

ABBREVIATIONS AND SYMBOLS

used in the text of abstracts

M.M. ... Mineralogical Magazine : M.A. ... Mineralogical Abstracts : A.M. ... American Mineralogist

CHEMICAL & CHEMICAL-PHYSICAL

cation-exchange-capacity	c.e.c.
chemical analysis	chem. anal.
concentrated	conc.
differential thermal analysis	d.t.a.
dilute	dil.
disintegrations per minute	d.p.m.
equivalent U_3O_8	eU_3O_8
ethylenediaminetetra-acetic acid	EDTA
heat of formation (absolute temperature subscript)	ΔH_t
hydrogen ion conc., acidity	pH
insoluble residue	insol. res.
isotopes, e.g.	^{40}Ar, ^{40}K
loss on ignition	ign. loss
milliequivalent	me.
microgramme	μg
million-years	m.y.
not determined	n.d.
not found	nt. fd.
not present	nil
parts per million	p.p.m.
rare earths	*TR* or *RE*
standard mean ocean water	SMOW
strength of solution, normal	*N*
— — — molar	*M*
substances in ionic state	
anions, e.g.	Cl^-, SO_4^{2-}
cations, e.g.	K^+, Fe^{3+}
thermogravimetric analysis	t.g.a.
trace	tr.
X-ray fluorescence analysis	XRF

CRYSTALLOGRAPHIC & STRUCTURAL

Ångstrom unit (10^{-8} cm)	Å
crystal axes	*a*, *b*, *c*
— face indices	(hkl)
— form indices	{hkl}
— zone indices	[hkl]
indices of X-ray diffractions	hkl
intensity,	*I*
— relative	I/I_0
interplanar spacing	*d*
mica structural polymorphs	$1M_1$, $2M_1$
Siegbahn units	kX
space group. These words will be written in full	
unit cell, formula units	*Z*
— — repeat distances	*a*, *b*, *c*
— — reciprocal lattice lengths of edges	a^*, b^*, c^*
— — interaxial angles direct lattice	α, β, γ
— — — — reciprocal lattice	α^*, β^*, γ^*

OPTICAL

dispersion, e.g.	$r > v$
electron microscopy	EM
extinction angle, e.g.	$\gamma : c$
infrared	IR
optic axial angle	2V
— — plane	O.A.P.
refractive index, in text	refr. ind.
— — of isotropic mineral	*n*
refractive indices	
of uniaxial mineral	ω, ϵ
of biaxial mineral	α, β, γ
sign of biaxiality	
negative	$2V_\alpha$ or −
positive	$2V_\gamma$ or +
ultraviolet	UV

PHYSICAL

calculated	calc.
calorie	cal.
calorie, large	kcal.
cycles per second	c/s
degree centigrade	°C
density	*D* (quote unit
— , relative, e.g.	D_4^{20}
electron paramagnetic resonance	e.p.r.
electron spin resonance	e.s.r.
gramme	g
hardness	H.
melting-point	m.p.
micron (10^{-4} cm)	μ
millimicron (10^{-7} cm)	$m\mu$
nanometre (10^{-7} cm)	nm
natural remanent magnetization	n.r.m.
pounds per square inch	lb/in.^{2}
pressure	*P*
soluble	sol.
specific gravity, terms of reference not known	sp. gr.
temperature	*T*
Vickers hardness number	VHN
wavelength	λ

SYMBOLS

approximately equal to	$\sim$
equal to	$=$
equal to or greater than	$\geqslant$
equal to or less than	$\leqslant$
greater than	$>$
less than	$<$
not equal to	$\neq$
parallel to	$\parallel$
per cent.	%
per mille	‰
perpendicular to	$\perp$
proportional to	$\propto$

AUTHOR INDEX

BEY, S., 69-943, 1453
BOTT, D., 69-2146
DEL-GAWAD, M., 69-3171
DULLAEV, R. N., 69-3220
DULLAYEV, Z. B., 69-373
ELEDO, M. E. J. DE, 69-190, 507, 2375
HARYYA, S. K., 69-2972
KERMANN, K. J., 69-2989
AMS, H. F., 69-895
AMS, J. B., 69-2122
AMS, J. W., 69-2268, 2380, 2480, 3343
DY, S. K., 69-3332
E-HALL, J. M., 69-2658
INARAYANA, D., 69-3581
LER, H. H., 69-2923
LER, I., 69-1881
USUMILI, M. S., 69-1487
ANAS'EV, G. D., 69-2704, 2738
ARD, J., 69-199
ARWAL, L., 69-3542
IORGITIS, G., 69-388
RINIER, H., 69-559, 1502, 2979, 3329
UILAR TOMÁS, M. J., 69-660, 663
HLRICHS, J. L., 69-1913, 2825
HMAD, M., 69-215
HMED, F. R., 69-1022
HRENS, L. H., 69-2249, 3223
ICARD, P., 69-1489
IELLO, R., 69-1239
IRES-BARROS, L., 69-873, 874
ITCIN, P. C., 69-26
ITKEN, M. J., 69-22
JAKAIYE, D. E., 69-1623
KHTAR, S., 69-858
KIMOTO, S., 69-1217
KIMOTO, S.-I., 69-2631, 3035
KIZUKI, M., 69-2093
KSEL'ROD, E. I., 69-1063
KSENOV, V. S., 69-612
LADAG, E., 69-3187
LAPIN, B. G., 69-1063
LARCON, H., 69-2961
LBERT, D., 69-3524
LBERT, R., 69-3524
LBERTI, A., 69-929, 1470
LBRECHT, P., 69-2189
LDCROFT, D., 69-2824
LDINGER, H., 69-2513
LDRED, K., 69-2023
LEKIN, O. A., 69-1351, 2208
LEKSANDROV, I. V., 69-390, 1184, 1256
LEKSANDROV, S. M., 69-1040
LEKSANDROV, V. B., 69-1485, 2926
LEKSANDRUK, V. M., 69-76
LEKSEYEV, F. A., 69-449
LESHIN, S. M., 69-453
LEXANDER, E. C., *Jr.*, 69-2248
LEXANDER, L. T., 69-342
LI, S. M., 69-1144
LÍAS, L. J., 69-598
LIETTI, A., 69-3520
LIETTI MURATORI, L., 69-2866
LLAIS, G., 69-1956
LLART, G. O., 69-883
LLÈGRE, C. J., 69-2722, 2773
LLEN, E. P., 69-1613
ALLEN, J. B., 69-1153
ALLEN, J. S., 69-342
ALLEN, R. V., 69-932, 1650
ALLEN, V. T., 69-2860
ALLEN, W. C., 69-3011
ALLISON, L. A., 69-2681
ALLMANN, R., 69-120, 164, 178, 1055, 1061, 1965, 1970
ALMADI, G. R., 69-3623
ALMINAS, H. V., 69-2228
ALONSO PASCUAL, J., 69-870
ALPERN, B., 69-3186
AL-RAWI, Y., 69-2406
ALSAC, C., 69-1594
ALTHAUS, E., 69-1210, 1856, 1874, 2053
ALTSCHULER, Z. S., 69-1147, 2369, 3070
ALVAREZ-ESTRADA, D., 69-100
AMBS, H., 69-2744
AMES, L. L., *Jr.*, 69-1233, 1234, 1235, 1236
AMMAR, A. A., 69-3037
AMMOU-CHOKROUM, M., 69-3008
AMORÓS, J. L., 69-268, 1024, 1041, 1251, 2633
AMSTUTZ, G. C., 69-630, 3349
ANANYAN, E. V., 69-3447
ANDEL, T. H. VAN, 69-1558
ANDERS, E., 69-1403, 3179, 3180
ANDERSON, A. T., 69-3103
ANDERSON, B. W., 69-324
ANDERSON, C. A., 69-2406
ANDERSON, D. L., 69-2626
ANDERSON, G. M., 69-630
ANDERSON, J. G. C., 69-1676
ANDERSON, O., 69-337
ANDERSON, R. E., 69-2816
ANDERSON, T. F., 69-1731
ANDREWS, J. M., 69-3037
ANDREYEV, P. F., 69-431
ANDRUSENKO, N. I., 69-853
ANGEL, F., 69-1700
ANGELELLI, V., 69-1507
ANH, T. H., 69-3423
ANJANAPPA, K., 69-3624
ANJANAPPA, K. A., 69-3446
ANNELL, C., 69-969, 1886
ANNERSTEN, H., 69-1702
ANON., 69-271, 1141, 1245, 1776, 2005, 2951, 2956, 2970
ANTHONIOZ, P.-M., 69-2582
ANTOINE, H., 69-1930, 2878
ANTUN, P., 69-1531
ANTWEILER, J. C., 69-1274
AOKI, K., 69-2406
AOKI, K.-I., 69-681
APOLLONOV, V. N., 69-580
APOSTOLOV, D. A., 69-2353, 2958
APPEL, L. E., 69-1114
APPLEYARD, E. C., 69-753
APPOLLONOV, V. M., 69-2944
ARAKAWA, E. T., 69-2641
ARAKI, T., 69-186, 1079
ARAVAMADHU, P. S., 69-2696
ARCHER, A. A., 69-1675
ARGALL, G. O., *Jr.*, 69-2968
ARISTARAIN, L. F., 69-605, 2394, 2395
ÁRKAI, P., 69-1547
ARKHANGEL'SKAYA, V. V., 69-2456
ARMBRUSTMACHER, T. J., 69-265
ARMITAGE, T. M., 69-2853
ARMSTRONG, R. L., 69-16, 1799, 2606
ÁRNASON, B., 69-759
ARNAUTOV, N. V., 69-420, 2170
ARNDT, J., 69-1170
ARNOLD, R. G., 69-1500
ARNOULD, M., 69-105
ARRHENIUS, O., 69-2182
ARRIENS, P. A., 69-2740
ARRINGTON, J. S., *Jr.*, 69-36
ARTEMOV, YU. M., 69-19, 417
ARTHUR, G., 69-3037
ARTRU, P., 69-113, 406, 407
ARUTYUNYAN, L. A., 69-351
ASAD, S. A., 69-2009
ASAYAMA, T., 69-1892
ASHKINADZE, G. SH., 69-485, 1258, 1372
ASHTON, P. R., 69-639
ASHTON, W. H., 69-145
ASWATHANARAYANA, U., 69-3101
ASZTALOS, I., 69-32
ATHAVALE, V. T., 69-45, 3086
ATKINS, F. B., 69-3232
ATKINS, L., 69-2794
ATRASHENOK, L. YA., 69-385
ATTERAAS, L., 69-3037
ATTEWELL, P. B., 69-2768
ATWATER, T., 69-1785
AUBRY, A., 69-2890
AUCOTT, J. W., 69-1890, 2768
AUGUSTITHIS, S. S., 69-1527
AVCHYAN, G. M., 69-2655
AXON, H. J., 69-478, 480, 2241
AYRTON, S., 69-1580
AYYAR, R. R., 69-122
AZADALIEV, G. A., 69-3220
AZBEL', I. YA., 69-447
AZZAROLI, A., 69-1790

BABAKHODJAEV, S., 69-964
BABAYEV, SH., 69-1941, 2560
BABKIN, I. N., 69-235
BABKIN, P. V., 69-3619
BABKINE, J., 69-517, 648, 3306
BABU, S. K., 69-781, 3604
BABU, V. R. R. M., 69-2286, 2311, 3266
BACHINSKI, D., 69-1134
BACHMANN, G., 69-2513
BÄCHTIGER, K., 69-2668
BACK, W., 69-2076
BADALOV, S. T., 69-264, 405, 2147
BADALOVA, R. P., 69-264
BADAR-UD-DIN, 69-955
BADER, E., 69-3335
BADIKOV, V. V., 69-3030
BAGCHI, D., 69-781
BAGGIO, P., 69-808, 2443
BAHEZRE, C., 69-3217
BAHL, D. P., 69-110
BAILEY, E. H., 69-2546
BAILEY, R. A., 69-2406
BAIN, D. C., 69-107
BAKAKIN, V. V., 69-1974, 2895
BAKER, B. L., 69-400, 3080
BAKER, D. W., 69-1617
BAKER, G., 69-499
BAKER, I., 69-1588, 1810
BAKER, P. E., 69-724
BAKER, S. R., 69-2534
BAKLANOVA, T. A., 69-606
BALASHOV, YU. A., 69-396
BALCONI, M., 69-1475, 3289
BALDANZA, B., 69-1400, 1678
BALDOCK, J. W., 69-3164
BALITSKIY, V. S., 69-1205, 2099
BALL, D. F., 69-85, 2357
BALOGH, K., 69-1291, 3105
BALOUS, M., 69-56
BAN, L. L., 69-41
BANÁS, M., 69-1529
BANDYOPADHYAYA, S., 69-1404
BANERJEE, S. K., 69-1914
BANIN, A., 69-82
BANK, H., 69-339, 3067, 3068
BANNO, S., 69-3184
BANNO, SH., 69-3239, 3426
BANSIGIR, K. G., 69-163
BAPST, G., 69-3052
BARANY, R., 69-1168
BARBIER, J., 69-2171, 2421
BARBIERI, F., 69-1293
BARBIERI, M., 69-3115
BARD, J.-P., 69-2583, 2584, 3556
BÁRDOSSY, G., 69-1009, 1506
BARDSLEY, W., 69-293
BARHAM, D., 69-302
BARIAND, P., 69-617, 1502
BARKER, D. S., 69-3458
BARKER, F., 69-2713
BARKER, H., 69-1821
BARKER, R. M., 69-2693
BARKER, W. W., 69-2913
BARNES, I., 69-2076
BARNES, W. H., 69-1022, 1085
BARNETT, P. R., 69-2808
BARNITSKIY, E. N., 69-460
BARO, R., 69-835, 2061, 3599
BARRER, R. M., 69-1238, 2124, 2906
BARRETT, L. R., 69-302
BARRICELLI, N. A., 69-2705
BARRY, T. I., 69-1036
BARSANOV, G. P., 69-859
BARTA, I., 69-1362
BARTEL, A., 69-1376, 1377
BARTEL, A. J., 69-2162
BARTH, T. F. W., 69-1630, 1893
BARTHOLEMEW, R. W., 69-2363
BARTL, H., 69-1991
BARTON, P. B., *Jr.*, 69-3016
BARTOSHINSKIY, Z. V., 69-3059
BASHIR, A., 69-1144
BASIT, M. A., 69-944
BASITOVA, S. M., 69-405
BASSETT, W. A., 69-2625, 3047
BASTA, E. Z., 69-3405
BASTISSE, É.-M., 69-2133
BASTRON, H., 69-1725, 2252
BASU, K. K., 69-3468
BATHURST, R. G. C., 69-2513
BATTERSON, S. A., 69-2706
BATURIN, G. N., 69-1311, 3154
BAUCHAU, C., 69-1098
BAUR, W. H., 69-188
BAUSCH, W. M., 69-2513
BAYER, G., 69-2668
BAYH, W., 69-1835
BAYLISS, P., 69-1494, 3019
BAYRAKOV, V. V., 69-535, 1458
BAZAROV, L. SH., 69-2170

Bazhenova, G. N., 69-3656
Bazhenova, T. K., 69-1321
Bazilevskaya, E. S., 69-1510
Beaumont, P., 69-195, 1687
Beck, M. E., 69-2662
Beck, M. E., *Jr.*, 69-1556, 1557
Beckwith, R. S., 69-3034
Bedarida, F., 69-828, 1030, 2630, 2746
Bederke, E., 69-802
Beer, K. E., 69-1566
Behruzi, M., 69-1975
Beiser, E., 69-1349
Belinga, S., 69-2861
Belluomini, G., 69-614
Beloussov, V. V., 69-1794
Belov, N. V., 69-1070, 1735, 1945, 1949, 1972, 1973, 1983, 1986, 1993, 2388, 2895
Belsare, M. R., 69-2303
Belt, C. B., 69-57
Bemmelen, R. W., van, 69-1795
Benayas Casares, J., 69-578
Bence, A. E., 69-2239
Bendeliani, N. A., 69-1183
Bender, M. L., 69-2174
Benjamin, R. E. K., 69-1709
Bennett, D. L., 69-1667
Bennett, J. M., 69-1992
Bennett, R. H., 69-3596
Bennison, A. P., 69-3510
Benyacar, M. A. R. de, 69-190, 1507, 2375
Bercea, I., 69-1088
Berckhemer, H., 69-2698
Berdesinski, W., 69-339
Berengilova, V. V., 69-1390
Berg, G. W., 69-680
Berge, J. W., 69-2594
Bergendahl, M. H., 69-1994
Berger, A., 69-979
Berger, M. G., 69-1014
Berger, V. I., 69-1998
Berlage, H. P., 69-1795
Berlin, R., 69-2153
Berman, S., 69-972, 1147
Bernal, J. D., 69-493
Bernardini, G. P., 69-2745
Berner, R. A., 69-416, 2062
Bernold, S., 69-2157
Berrier, J., 69-3041
Berry, W. B. N., 69-2693, 2819
Bershov, L. V., 69-853, 2647
Berthelay, J.-C., 69-3549
Berthois, L., 69-3489
Berthout, P.-Y., 69-658
Bertolani, M., 69-805, 1446, 1714, 1762
Bertossa, A., 69-3474, 3620
Bertrand, J. M. L., 69-800
Bertucat, M., 69-1593
Bespalaya, E. A., 69-3475
Bessmertnaya, M. S., 69-1528
Besson, H., 69-2132
Besson, M., 69-2965
Bettiga, A. C., 69-1863
Beus, A. A., 69-1287, 2172
Beyseyev, O. B., 69-1445
Bezrukov, G. N., 69-1158
Bezrukov, P. L., 69-3397
Bezzi, A., 69-1413
Bezzi, M., 69-3108
Bhagavan, C. S. K., 69-3085
Bhatia, S. B., 69-3416, 3443
Bhatnagar, V. M., 69-602, 845, 1078
Bhattacharya, A. C., 69-3503
Bhattacharyya, B. N., 69-952
Bhattacharyya, B. P., 69-822
Bianchi, A., 69-2589
Bibikova, E. V., 69-21
Bibron, R., 69-474, 2234
Bickford, M. E., 69-2713, 2714
Biettmann, D., 69-474
Biggar, G. M., 69-1216, 2045, 2089, 2138
Bikram, S., 69-3574
Bilgrami, S. A., 69-2983
Bilinkis, G. M., 69-3395
Billhardt, H. W., 69-3042
Billing, D. E,, 69-2648
Billy, C., 69-3076
Binns, R. A., 69-2246
Biquand, D., 69-2504
Birle, J. D., 69-136
Bisaz, S., 69-2087
Bisby, H., 69-68
Bitar, K. E., 69-317
Biterman, I. M., 69-2458
Bjørlykke, H., 69-222
Björnsson, S., 69-760
Black, P. M., 69-705, 706
Blackburn, W. H., 69-505
Blackerby, B. A., 69-623
Blackmon, P. D., 69-2539
Blagul'kina, V. A., 69-1817
Blake, D. H., 69-1620
Blake, M. C., 69-1726
Blake, M. C., *Jr.*, 69-2469
Blanc, C., 69-77
Blanchard, F. N., 69-2674
Blander, M., 69-3171
Blankenburg, J., 69-2084
Blazejczak, J., 69-46
Blazy, P., 69-2072
Blee, J. J. ,69-2534
Bloch, M. R., 69-1352
Block, S., 69-127
Blockley, J. G., 69-212, 226, 697
Bloomfield, K., 69-1680, 3407
Bloosterman, J. B., 69-727
Blount, C. W., 69-2082
Bluck, B. J., 69-3487
Blüml, A., 69-871
Bobier, C., 69-3367
Bodart, D. E., 69-1633
Boettcher, A. L., 69-309, 1224, 3045
Bofinger, V. M., 69-3
Bogdanov, V, V., 69-2321
Bogdanova, S. V., 69-3500
Bogdanova, V. I., 69-3026
Boguslavskiy, I. S., 69-2462
Böhm, G., 69-3335
Böhm, H., 69-3006
Bohner, G. E., *Jr.*, 69-3125
Bohor, B. F., 69-995, 996, 2829
Böjtös-Varrok, K., 69-1288
Bokshá, O. N., 69-2644
Bölau, E., 69-2413
Bolfa, J., 69-575, 763, 3007
Bollmann, W., 69-119, 1052
Bonarelli Marzocchi, L., 69-3096, 3098
Bonatti, E., 69-104, 2856
Bondam, J., 69-151,408, 1017
Bondarenko, L. P., 69-818
Bonel, G., 69-851
Bonhomme, M., 69-8
Bonnefous, J., 69-3117
Booker, J., 69-862
Books, K. G., 69-1557
Boorman, R. S., 69-2146
Booth, B., 69-1565
Borchardt-Ott, W., 69-1953
Borcher, H., 69-754
Borchert, H., 69-2401
Bordet, P., 69-1803, 1894
Borg, I. Y., 69-1836, 2757
Borg, K., 69-477
Boriani, A., 69-811, 1984
Borisenko, L. F., 69-369
Borisenko, N. F., 69-2731
Borisenkov, V. I., 69-3107
Borishamskaya, S. S., 69-3330
Borisov, S. V., 69-2895
Born, H. J., 69-73, 968
Borodaev, Y. S., 69-3330
Borodin, L. S., 69-1642
Borovec, Z., 69-589
Borovik-Romanov, A. S., 69-2078
Borreswara Rao, C., 69-3119
Borschutzky, J., 69-144
Borsi, S., 69-2726
Bose, M. K., 69-516
Boström, K., 69-2084, 3131
Bottinga, Y., 69-2198
Boucarut, M., 69-3370
Boucher, M. L., 69-141
Boucot, A. J., 69-2819
Boudette, E. L., 69-901
Boudier, F., 69-510
Boudin, A., 69-966
Bouladon, J., 69-1461
Boulin, J., 69-3550
Bouroz, A., 69-770, 2520
Bouška, V., 69-495, 583
Boutcher, S. M. A., 69-903
Bouwer, R. F., 69-2939
Bowden, P., 69-2363
Bowditch, D. C., 69-2793
Bowen, L. H., 69-2899
Bowes, D. R., 69-1562, 1806, 2577, 3363
Bowes, W. A., 69-198
Bowie, S. H. U., 69-60, 68, 220
Bowles, C. G., 69-2540
Boyarskaya, R. V., 69-2332
Boychenko, E. A., 69-346
Boyd, W. W., 69-2662
Boyer, C., 69-650, 3369
Boyer, F., 69-3168
Boyko, V. L., 69-1460
Boyle, R. W., 69-1101, 1535
Brace, W. F., 69-1748
Bracewell, J. M., 69-2851
Bradbury, J. C., 69-2034
Braddock, W. A., 69-2540
Bradshaw, P. M. D., 69-1384
Bradshaw, R., 69-1781
Brafman, O., 69-165
Bragin, I. K., 69-2941
Brahmam, N. K., 69-2696
Braman, R. W., 69-933
Brandt, S. B., 69-452
Brannock, W. W., 69-2252
Branscombe, K. C., 69-2989
Brat, S., 69-3001
Bratosin, I., 69-1307
Breck, D. W., 69-138
Breger, I. A., 69-2815
Brett, N. H., 69-280, 2066
Brett, R., 69-2237, 3192
Brew, D. A., 69-2465
Brewer, P. G., 69-2200
Brezgunov, V. S., 69-437, 456
Brežný, B., 69-3014
Briat, B., 69-2640
Bricker, O. P., 69-3054
Briden, J. C., 69-2663, 2664, 2819
Briegler, D., 69-2489
Brigo, L., 69-2016
Brindley, G. W., 69-95
Brisbourne, R. H., 69-2824
Bristow, C. M., 69-1011
British Ceramic Society, 69-3037
Broadhurst, F. M., 69-3615
Brobst, D. A., 69-1137
Brock, A., 69-1788
Brokaw, A. L., 69-2002
Bromley, A. V., 69-732
Brooker, E. J., 69-959
Brookins, D. G., 69-2715
Brooks, C., 69-908, 1282
Brooks, C. K., 69-2161, 2804
Brooks, R. R., 69-354, 468
Brophy, G. P., 69-603
Brothers, R. N., 69-704, 3199
Brotzen, O., 69-2150
Brotzu, P., 69-1691
Broughton, P. L., 69-2611
Brousse, R., 69-9, 2876, 3524
Brovchuk, I. F., 69-582
Brown, C. E., 69-1148, 2145,
Brown, E. H., 69-1451
Brown, G. E., 69-2893
Brown, G. M., 69-630
Brown, J. S., 69-630
Brown, P. E., 69-2855
Brown, W. E., *Jr.*, 69-2706
Brown, W. L., 69-2121
Bruce, G. A., 69-321, 323
Brueckner, H. K., 69-16
Brüll, E., 69-2381, 2634
Brunfelt, A. O., 69-1374
Bruno, E., 69-2588
Bruyevich, S. V., 69-428
Bryan, W. B., 69-1656
Bryant, B., 69-1342, 1727
Brydon, J. E., 69-115, 992
Bryhni, I., 69-627, 2728
Bubeleva, L. V., 69-2297
Bubenicek, L., 69-1122
Bucha, V., 69-916
Buchwald, V. F., 69-1393
Buck, K. L., 69-2143
Bud'ko, I. A., 69-287, 1526,
Budnikov, P. P., 69-280
Budworth, D. W., 69-3037
Bugayenko, D. V., 69-1440
Bugge, A., 69-217
Bugrov, N. M., 69-430, 431
Buist, D. S., 69-280
Bukin, M. J., 69-3352
Bukin, V. I., 69-158
Bulatov, V. V., 69-78
Bullard, E. C., 69-862, 2819
Bunch, T. E., 69-2392, 2800
Bunker, C. M., 69-956, 957,
Burger, A. J., 69-2712
Burgess, A. S., 69-2768
Burkart-Baumann, I., 69-
Burke, W. H., 69-2739
Burkin, A. R., 69-2999
Burleigh, R., 69-1821
Burnett, D. S., 69-2239
Burnham, C. W., 69-1023
Burns, R. G., 69-143
Burragato, F., 69-1395,
Burri, C., 69-1473, 2441
Burri, G., 69-2352
Burton, J. D., 69-426, 3146
Buryak, V. A., 69-925, 1997,
Bur'yanova, E. Z., 69-2321
Burzlaff, H., 69-1968
Buschendorf, F., 69-221
Bush, C. A., 69-956, 957,
Butler, P., *Jr.*, 69-2280
Butorin, P. P., 69-2617
Butterman, W. C., 69-3305
Butuzova, G. Yu., 69-2183
Bye, G. C., 69-2824

LEE, J. D., 69-1741
S, F. M., *Jr.*, 69-2816
VA, A. V., 69-2378
KOV, V. V., 69-1440
E, J., 69-3037

ZAT, V., 69-42
I, R., 69-2784
I, L. J., 69-261, 1525, 2750
GAN, R. A., 69-3132
VELL, D. E., 69-29
MERER, A., 69-2166
T, G., 69-3114
LÈRE, S., 69-105, 538, 587, 8, 1149, 1757, 1931, 2132, 16, 3001, 3495
LEUX, A., 69-3076
NEY, T., 69-1590
OWELL, D. W., 69-200
, L. C., 69-2798
EGARI, E., 69-2262, 2284, 62, 3277
LERI, M., 69-2924
VERT, S. E., 69-427, 3144
VIN, M., 69-3124, 3126
VO, C., 69-189
BEL, B., 69-1264, 2144
BOLY, J., 69-2417
LIBEL, I., 69-2642
PBELL, A. S., 69-2851
PBELL, E., 69-2165
PBELL, E. Y., 69-382
PBELL, F, A., 69-1007, 1432
PBELL, I. B., 69-411
PBELL, I. H., 69-1622
E, R. F., 69-2187
N, J. R., 69-2451
NON, R. S., *Jr.*, 69-2143
TAGREL, J.-M., 69-2724
UT-AMORÓS, M., 69-1024, 1041
DEVILA, R., 69-659, 1420, 2502, 558
EDRI, S., 69-666
P, A. C., 69-745, 1309
APEZZA, M., 69-1166, 1219, 054, 2427, 2932, 3056
LES-GIBERGUES, A., 69-26
MICHAEL, I. S. E., 69-3430
PENTER, J. R., 69-1703
R, M. H., 69-2798
E, R. M., 69-2100
RARO, F., 69-11
RAT, H. G., 69-2421
RON, J.-P., 69-856, 3106, 3612
RON, M. K., 69-1848
RUTHERS, T. G., 69-280, 2852
STENS, H., 69-542
SWELL, D. A., 69-1560
TER, N. L., 69-3173
TER, R. M., 69-715
ES, J., 69-2072, 2755
SHYAP, S. M., 69-3505
SIDY, W. A., 69-3197
TAÑÓN, A., 69-661
TIGLIONE, P. C., 69-1504
ANI, A., 69-2758
T, J. A., 69-3112
E, R., 69-558, 573, 611, 1747
H, F., 69-2337
ESTINO SILVA, L., 69-2994
DREDO, A., 69-1570
DRERO UCEDA, A., 69-762
NÝ, P., 69-553, 796, 872, 2285
NÝ, V., 69-1035
VELLE, B., 69-1747
VELLE, B. D., 69-558
VEN, J. F., 69-934
ARI, M., 69-1907
BRON, F., 69-617, 1488, 1502, 537, 3348

CHABANEL, M., 69-585
CHAIGNEAU, M., 69-2213, 3295
CHAKRABARTI, A. K., 69-2024
CHAKRABORTY, K. L., 69-541
CHAKRABORTY, K. R., 69-3268
CHALARD, J., 69-769
CHALLIS, G. A., 69-358
CHALMERS, R. A., 69-944
CHALOV, P. I., 69-1271
CHAMBERLAIN, J. A., 69-1602
CHAMBU, C., 69-77
CHAMLEY, H., 69-1002
CHAMPNESS, P. E., 69-3046
CHANDA, S. K., 69-3506
CHANDHA, D. K., 69-3625
CHANDLER, J. C., 69-2815
CHANG, L. L. Y., 69-3005
CHANH, N. B., 69-300
CHANTRET, F., 69-1841
CHAO, G. Y., 69-1605, 3317
CHAPMAN, S. L., 69-49
CHAPPELL, B. W., 69-779, 2740
CHARBIT, P., 69-33
CHARETTE, D. J., 69-1540
CHARITONOV, F. J., 69-280
CHARLET, J.-M., 69-854
CHARLOT, R., 69-1798, 2711
CHARNELL, J. F., 69-160
CHARSLEY, T. J., 69-1153
CHARYGIN, A. M., 69-2735
CHASE, T. E., 69-2485
CHASHKA, A. I., 69-1411
CHATENET, R., 69-199
CHATTERJEE, A. C., 69-692
CHATTERJEE, B., 69-692
CHATTERJEE, C. N., 69-781
CHATTERJEE, N. D., 69-2290
CHATTERJEE, P. K., 69-3442
CHATTERJEE, S. K., 69-99, 531
CHATTERJI, S., 69-2067
CHAUDHRY, M. N., 69-1433
CHAUDHURI, N. P., 69-3414
CHAUDHURI, S., 69-2716
CHAUMONT, C., 69-1930, 2878
CHAURIS, L., 69-651, 2936, 3366
CHAUSSIDON, J., 69-2845
CHAUVEL, J. J., 69-1463, 3342
CHAWDHURY, S. A., 69-930
CHAYKA, M., 69-1405
CHAYNIKOV, V. I., 69-2460
CHEDZHEMOV, G. KH., 69-23, 1818
CHEENEY, R. F., 69-1706
CHEKULAYEV, V. P., 69-3463
CHENEVOY, M., 69-653, 3550
CHENNAUX, G., 69-1004
CHERDYNTSEV, V. V., 69-384, 445
CHEREPANOV, V. A., 69-2734
CHEREPIVSKAYA, G. E., 69-1619
CHERNITSYN, V. B., 69-2353, 2958
CHERNOVA, N. I., 69-2388
CHERNYĬ, L. N., 69-281, 2307
CHERNYSHEVA, V. I., 69-3397
CHESNOKOV, B. P., 69-3310
CHESSEX, R., 69-1803
CHESTER, R., 69-977
CHESTERMAN, C. W., 69-2406
CHESWORTH, W., 69-2602
CHIKHACHEV, V. A., 69-1751
CHIN-NAN, L.-H., 69-2713
CHINNER, G. A., 69-821, 1419
CHISHOLM, J. E., 69-2109
CHISTYAKOVA, M. B., 69-3222
CHOL, G., 69-172
CHOONG, W. Y., 69-62
CHOUBERT, G., 69-899, 1798, 2711
CHRIST, C. L., 69-2756, 2832, 2920
CHRISTENSEN, E. M., 69-2706
CHRISTENSEN, M. N., 69-2406
CHRISTIAN, R. P., 69-2799

CHRISTIANSEN, R. L., 69-3357
CHRISTIANSON, P., 69-2685
CHRISTOPHE-MICHEL-LÉVY, M., 69-483, 1230
CHROMY, S., 69-2747
CHUA, K. S., 69-1026
CHUKHROV, F. V., 69-1921, 2302
CHUMAKOV, A. A., 69-3395
CHUPAKHIN, M. S., 69-21
CHUPROV, V. V., 69-357
CHURCH, W. R., 69-630
CHUTE, J. M., 69-2853
CIALDI, G., 69-2921
CID-DRESDNER, H., 69-1084
CIFELLI, R., 69-644
CIMMINO, F., 69-935
CIOFLICA, G., 69-1089
CIPRIANI, C., 69-2745
CLARIDGE, G. G. C., 69-411
CLARK, A. H., 69-1267, 2344, 2345
CLARK, A. L., 69-260, 2948
CLARK, A. M., 69-2345
CLARK, G. R., 69-234
CLARK, G. W., 69-282
CLARK, J. P., 69-2824
CLARK, J. R., 69-139, 142, 2920
CLARK, L. A., 69-1532
CLARK, S. H. B., 69-2948
CLAXTON, C. W., 69-1621
CLAYTON, R. N., 69-49, 416
CLEVERLY, W. H., 69-2243, 2245, 3178
CLIFTON, H. E., 69-392, 2772
CLOCCHIATTI, R., 69-3359
COATS, C. J. A., 69-2296
COATS, R. R., 69-630, 1811, 2406
COBB, J. C., 69-69
COCKBAIN, A. G., 69-604, 850
CODA, A., 69-2316
COELLO, J., 69-661
COETZEE, C. B., 69-3411
COGULU, E., 69-2495
COHEN, N. E., 69-354
COHEN-ADDAD, C., 69-1069
COLBERTALDO, D. DI, 69-229, 2013, 2014, 2015
COLE, J. F., 69-1238, 1837
COLE, J. W., 69-707
COLE, M. M., 69-461
COLE, W. F., 69-98
COLEMAN, R. G., 69-1447, 1725, 1726, 1816, 2278, 3202, 3251, 3284
COLINVAUX, P. A., 69-433
COLLINS, A. H., 69-3037
COLLINS, J. H., 69-1895
COLLINSON, D. W., 69-1756
COLLOMB, P., 69-738, 739
COLOMBO, U., 69-2060
COLVILLE, A., 69-1076
COLVINE, R. J. L., 69-1415
COMBES, P.-J., 69-1151, 1932
COMPSTON, W., 69-3, 4, 2727, 2740, 3138
CONARD, M., 69-3491
CONDE, C. S., 69-100
CONDON, W. H., 69-2320, 2406
CONEL, J. E., 69-3606
CONKLIN, N., 69-975
CONKLIN, N. M., 69-1778, 2480
CONNAN, J., 69-394
CONNOR, J. J., 69-2220
CONQUÉRÉ, F., 69-517, 648, 3306
CONRAD, E. H., 69-1187
CONSTANTINOFF, R., 69-1088
CONTI, L., 69-1456, 1457, 1640, 3262
COOK, B. G., 69-1625
COOK, E. F., 69-3354
COOK, H. E., 69-2406

COOKE, R. U., 69-2691
COOMBS, D. S., 69-3540
COOPER, J. A., 69-2707
COORAY, P. G., 69-980
COPPENS, R., 69-2814
COQUEMA, C., 69-70
CORAZZA, E., 69-177, 1967, 2759, 2921
CORBETT, K. D., 69-1601
CORLETT, M., 69-1059, 2668
CORLISS, J. B., 69-1937
CORMINBOEUF, P., 69-2953
CORNELIUS, K. D., 69-255
CORNISH, D. C., 69-3037
CORNWALL, H. R., 69-1121
CORNWELL, J. D., 69-866, 2657
COTELO NEIVA, J. M., 69-1123
COULOMB, R., 69-70
COULON, C., 69-3376, 3404
COULTER, B. S., 69-2842
COURAU, M., 69-1782
COURTOIS, A., 69-2930
COUTINHO, J. M. V., 69-726
COUTURIER, A., 69-655
COX, A., 69-2406, 2452, 2819
COX, F. C., 69-3206
COX, R., 69-61
CRAIG, J. R., 69-3021
CRAMER, W. G., 69-1889
CREER, K. M., 69-860
CRELLING, J. C., 69-2565
CREMER, M., 69-2267
CRESPI, R., 69-3218
CRISTANTIELLO, M., 69-2688
CRNKOVIĆ, B., 69-1019
CROCKET, J. H., 69-1319, 2803
CROFT, J. B., 69-108, 111
CROOK, N. D., 69-98
CROS, P., 69-2510
CROSBY, P., 69-3589
CROSSLAND, M., 69-3037
CROUCH, A. B., 69-108
CROWNINGSHIELD, G. R., 69-320
CROXFORD, N. J. W., 69-239
CULBERTSON, W. C., 69-1145
CULLEN, D. J., 69-897
CUMMINGS, D., 69-2505
CUPPELS, N. P., 69-200
CURRAY, J. R., 69-2549
CURTIN, G. C., 69-1120
CURTIS, C. D., 69-2855, 3111
CURTIS, G. H., 69-2406
CUTLER, I. B., 69-3037
CUTTITTA, F., 69-615, 1147, 1848
CZERMIŃSKI, J., 69-1006, 2991
CZYGAN, W., 69-1830

DACHILLE, F., 69-2064
DADASHEV, F. G., 69-1371
DAGLEY, P., 69-2658
DA GRUZ GASPAR, O., 69-2971
DAHL, O., 69-2130
DALIMOV, T. N., 69-689
DALL'AGLIO, M., 69-1383
DALLWITZ, W. B., 69-825
DAL PIAZ, G., 69-2589
DALRYMPLE, G. B., 69-2406, 2452 2819
DALY, L., 69-837
D'AMICO, C., 69-3379
D'ANDRADE, R. F., 69-1116
DANGEARD, L., 69-3490, 3491
D'ANGELANTONIO, A., 69-2765
DANIELS, J. L., 69-696
DANILOV, L. T., 69-431
D'ANS, J., 69-2037, 2083
DANTL, G., 69-1737
DA ROIT, R., 69-1383
DARRAGH, P. J., 69-340
DARRIET, B., 69-1068

Dart, R. A., 69-195
Das, M. S., 69-45
Dasch, E. J., 69-3360
Dasgupta, D. R., 69-175, 570
Das Gupta, H. C., 69-3543
Datta, A. K., 69-3063
Datta, N., 69-2067
Datta, R. K., 69-1064
da Veiga Ferreira, O., 69-2729
David, B., 69-1307, 2232, 2233
Davidenko, I. V., 69-2308
Davidge, R. W., 69-3037
David Gomes, R. A., 69-3401
Davidson, D. F., 69-2175, 2184
Davidson, D. M., *Jr.*, 69-1118
Davies, J. A., 69-2124
Davies, M., 69-126
Davies, W. E., 69-1922
Davies, W. O., 69-2365, 2366
Davis, A. G., 69-997
Davis, B. L., 69-1164
Davis, G. L., 69-903
Davoine, P., 69-3139
Davydenko, A. G., 69-2593
De, S. K., 69-97
de Abeledo, M. E. J., 69-190, 1507, 2375
Dearman, W. R., 69-733, 3547
Dearnley, R., 69-1704
Deb, M., 69-2968, 3328
de Benyacar, M. A. R., 69-190, 1507, 2375
De Béthune, P., 69-3207
DeCarli, P. S., 69-3173
DeFelice, J., 69-3193
De Fino, M., 69-3210
Degens, E. T., 69-2056
de Gramont, X., 69-562, 633, 869, 3077
de Herve, A. de G., 69-649, 3368
Dehon, M., 69-966
Deicha, G., 69-595, 1368
Deines, P., 69-2196
Dejou, J., 69-40, 1930, 2191, 2416, 2878
Dekate, Y. G., 69-2987
De Keyser, W. L., 69-280
de Kimpe, C., 69-2877
de Lafont, D. S., 69-267
Delaloye, M., 69-1802, 1803
de la Roche, H., 69-625, 1285, 1286, 2400
Delas, J., 69-1332
Delavault, R. E., 69-3166
Delevaux, M. H., 69-1274, 1378, 2218
Delfaud, J., 69-2868
Delgadillo, E., 69-2961
Delibrias, G., 69-9, 18, 2729
Delitsin, I. S., 69-1157
Della Giusta, A., 69-935, 1030, 1413
Dell'Anna, I., 69-1679, 2522 3498
Dell'Orto, G., 69-2586
Dellyes, R., 69-2754
Del Monte, M., 69-3382, 3525
Delon, J.-F., 69-2754
Demangeon, P., 69-2521
De Michele, V., 69-1764, 2667
Demidova, N. G., 69-2736
Denaeÿer, M. E., 69-679
Denahan, S. A., 69-2674
Denholm, L. S., 69-254
Denisenko, E. A., 69-1820
Denison, R. E., 69-2739
Denisov, E. P., 69-686
Dennen, W. H., 69-52, 505
Denson, N. M., 69-2547
Denton, G. H., 69-1799
de Peyronnet, P., 69-3528
De Pieri, R., 69-1129, 1980
Derbaremdikar, M. M., 69-2186
Deribas, A. A., 69-2098
Derie, R., 69-280
de Roever, W. P., 69-258
Derry, D. R., 69-234
Desai, S. D., 69-3255
Desautels, P. E., 69-981
Desborough, G. A., 69-3231
de Segonzac, G. D., 69-113, 1003, 1004
Deshmukh, S. S., 69-1404
Desthieux, F., 69-2861
De Swardt, M. C., 69-75
Detterman, R. L., 69-1812
Deuser, W. G., 69-2056
De Vecchi, G., 69-2443, 2562
De Velde Harsenhorst, Z., 69-2939
Devereux, I., 69-1784
Devirts, A. L., 69-2217
Devismes, P., 69-1513
de Waard, D., 69-2601, 2603, 3591
Dewey, J., 69-2819
De Wolff, P. M., 69-34
Dhoste, M., 69-3554
Dickey, D. D., 69-1846
Dickey, J. S., *Jr.*, 69-710
Dickinson, W. R., 69-1657
Dickson, F. W., 69-2082
Dickson, J. A. D., 69-891
di Colbertaldo, D., 69-229, 2013, 2014, 2015
Didomenico, M., *Jr.*, 69-2642
Dieni, I., 69-2432
Dierks, H., 69-2882
Dietrich, H., 69-2882
Dietrich, J., 69-1423, 1769
Dietrich, V., 69-1581, 3371
di Furia, E., 69-229
Di Girolamo, P., 69-1575
Dilawari, A. H., 69-269
Diman, E. N., 69-2095
Dimitrescu, R., 69-1088, 3390
Dimitriu, A., 69-1260, 1335
Dinaburg, I. B., 69-572
Dinnin, J. I., 69-947, 2163
Dinnin, J. J., 69-1865
Diouri, M., 69-899
Di Paola, E. C., 69-991
Di Sabatino, B., 69-1127
Ditmar, V. I., 69-2531
Divakov, K. S., 69-2353
Djerassi, C., 69-2640
Dmitriyev, Z. A., 69-3568
Dobřina, E. I., 69-2217
Dobretsov, N. L., 69-420, 1435, 1721, 2098, 3140, 3141
Dodd, R. T., 69-1397, 2242, 2251
Dodge, F. C. W., 69-2281, 3265
Doe, B. R., 69-1376, 1378, 2498
Doell, R. R., 69-2406, 2819
Doenitz, F.-D., 69-1054
Doering, W. P., 69-2797
Döhner, C., 69-3521
Dolgov, Yu. A., 69-2170
Dolin, D. A., 69-3475
Dollase, W. A., 69-153, 1981
Dollimore, D., 69-2824, 3037
Dolomanova, E. I., 69-1370
Domańska, E., 69-3214
Donakov, V. I., 69-550
Donald, E., 69-1832
Donaldson, E. M., 69-2774
Donati-Cucinotta, G., 69-3518
Donnay, G., 69-2396, 3009, 3350
Donnay, J. D. H., 69-1965, 3009
Donnot, M., 69-1593
Dontsova, E. I., 69-365, 1381
D'Orey, F. C., 69-2011
Dorfman, A. M., 69-1204
Dorfman, M. D., 69-1204
dos Santos, A. R., 69-3225
Dostál, J., 69-524
Douglas, A. G., 69-2188, 3113
Downing, R. A., 69-3143
Dracass, J., 69-3037
Drake, A. A., *Jr.*, 69-1800
Drake, C. L., 69-630
Drewes, H., 69-2223
Drioli, E., 69-1239
Drits, V. A., 69-1050, 2897
Drozdova, T. V., 69-1311
Drozhzhin, V. M., 69-2201, 2202
Dubinina, V. N., 69-511
Dubois, R., 69-3560
Dubrov, Yu. N., 69-1365
Duchâtelle-Robinaud, G., 69-35
Duchaufour, P., 69-114, 2841
Ducros, P., 69-33
Dudek, A., 69-2721
Dudikina, A. S., 69-1466
Duff, E. J., 69-3044
Duffell, S., 69-1722
Duffield, W. A., 69-2484
Duk, V. L., 69-794
Duke, M. B., 69-2237
Duke, W., 69-2156
Dumitriu, C., 69-1685
Dumitriu, M., 69-1685
Dunayev, V. A., 69-914
Duncan, A. R., 69-2168
Duncan, N. D., 69-333
Dunham, A. C., 69-752
Dunham, K. C., 69-1100, 1142, 2415
Dunin-Barkovskaya, E. A., 69-223, 569
Dunoyer de Segonzac, G., 69-113, 1003, 1004
Duplaix, S., 69-646, 3493
Dupuy, C., 69-2291
Durand, G., 69-1888
Durasova, N. A., 69-377
Durneva, N. N., 69-914
Durozoy, G., 69-586
Dusausoy, Y., 69-622, 2890, 2930
Dusmatov, V. D., 69-1539
Dutcher, R. R., 69-2565
du Toit, R. S. J., 69-888
Dvořáčková, O., 69-1380
Dvornikov, A. G., 69-1340, 1389
Dwornik, E. J., 69-615, 933, 1736
Dwornik, S. E., 69-2706
Dwornikov, A. H., 69-1012
Dyson, D. J., 69-44

Eakins, G. R., 69-2229
Eanes, E. D., 69-2086
Eastwood, T., 69-2415
Eberhard, E., 69-1472
Eberhardt, A., 69-2038
Eberhart, J.-P., 69-3052
Ebhardt, G., 69-2513
Eckel, E. B., 69-2816
Edelman, N., 69-2412, 2491
Edgar, A. D., 69-1227, 1231, 1437
Edge, R. A., 69-970
Edmonds, E. A., 69-1566, 1674
Edwards, J., 69-2658
Edwards, K. W., 69-1849
Efanova, V. A., 69-272
Efendiyev, G. Kh., 69-373
Efimov, A. F., 69-3300
Efimov, A. P., 69-1539
Efimova, M. I., 69-350
Egel', L. E., 69-2462
Eggler, D. H., 69-3451
Eglinton, G., 69-2188, 3113
Egorov, A. S., 69-3567
Egorov, I. N., 69-1139, 1644
Egorov-Tismenko, Yu. K., 1973
Ehrlich, G. H., 69-1361
Ehrstrom, C.-E., 69-3075
Eigenfeld, R., 69-3384
Eigenfeld, R. F. W., 69-346
Eijkelboom, G., 69-1596
Einaudi, M. T., 69-3271, 332
Ekern, E. B., 69-2816
Elderfield, H., 69-977
Elert, K.-H., 69-3521
El Goresy, A., 69-1531, 335
El-Hinnawi, E. E., 69-2148, 3314
Elinson, M. M., 69-1370
Eliseev, E. N., 69-207
Elísson, G., 69-758
Ellenberger, F., 69-738, 73
Eller, J. P. von, 69-654
Elliott, J. C., 69-852
Elliott, J. E., 69-2226
Elliott, R. L., 69-236, 463,
Ellis, A. J., 69-1202
Ellis, H. A., 69-877
Elliston, J., 69-3516
El Mikacher, S., 69-3609
Elsdon, R., 69-3449
Elwell, D., 69-1171
Embrey, P. G., 69-2372, 3341
Emiliani, F., 69-2809, 3096,
Enberg, C., 69-1904
Endo, Y., 69-1875
Engel, A. E. J., 69-1607
Engel, C. G., 69-1607, 2485
Engel, P., 69-2352
Engelhardt, E. D., 69-409
Engelhardt, W. von, 69-22
Engles, J. C., 69-2718
Eppler, W. F., 69-1241
Epshtein, E. M., 69-389
Epstein, S., 69-1295
Erickson, R. L., 69-3165
Érlikh, É. N., 69-690
Erlinger, H. P., 69-995
Ermakov, N. P., 69-1385
Ermakov, V. I., 69-3158
Ermilova, L. P., 69-2302
Eroshev-Shak, V. A., 69-19
Ershov, V. M., 69-1275
Escobar, C., 69-1084
Éshkin, V. Yu., 69-606
Espagno, L., 69-77
Essington, E. H., 69-2816
Esson, J., 69-1279
Estéoule, J., 69-2131
Eugster, H. P., 69-2126, 3533
Eulitz, W. R., 69-327
Evans, A. L., 69-909
Evans, A. M., 69-2604
Evans, B. W., 69-2501
Evans, H. T., *Jr.*, 69-1061
Evans, J. G., 69-462
Evers, H. J., 69-2343
Ewart, A., 69-707, 708, 745, 1309, 2168, 3083

Fabricius, F. H., 69-2513
Fabries, J., 69-519, 520
Fadeev, V. A., 69-683, 684
Fagherazzi, G., 69-2060
Fahey, J. J., 69-2780, 2860
Fairbairn, H. W., 69-2715
Fanfani, L., 69-1086
Fang, J. H., 69-934, 2927

ONE, D., 69-936, 1710, 3336
OW, N. H., 69-472
ER, N., 69-940
ER, V. C., 69-1902, 2825
QI, F. A., 69-101
, H., 69-2742
E, C., 69-694, 3424
E, G., 69-2173, 2716
E-MURET, A., 69-899, 1798, 11
RSKAIA, M. A., 69-515
ETTO, L., 69-1907, 1909
, G. H., 69-846, 1952
TIG, H., 69-3195
ERICO, M., 69-1484
UK, F., 69-237, 589
ROVA, ZH. N., 69-3026
ING, W., 69-1180
INGER, T., 69-3433
KNECHT, W., 69-1182
ER, E. E., 69-2372, 3315, 3341
SCHE, J., 69-1066
NELLY, E. J., 69-2162
NING, P. J., 69-1566
TON, M. D., 69-2716
LA, P., 69-1924
MOSO, M. L., 69-514, 546, 1569
RAGNE, A., 69-813, 3559
RARA, G., 69-11, 2726
RARESE, G., 69-3520
RARIS, G., 69-2886, 2924
REIRA, C. P., 69-2180
RERO, J., 69-113
RIANS, O. J., *Jr.*, 69-197
ENKO, E. G., 69-2928, 2929
GEL'SON, T. S., 69-2511
DLER, K., 69-2445
D, D., 69-3275
LDER, G., 69-898, 1796
RRO, G., 69-2630
STAS Y CONTRERAS, B., 69-1152
PESCU, M. G., 69-1339, 1684
KO, A. S., 69-235
CH, C. B., 69-282
CH, W. I., 69-2006, 2867
GER, G. C., 69-2034
GER, L. W., 69-1023
NEY, J. J., 69-186, 1491
ENTINI, M., 69-1343
ENTINI, M. P., 69-3281
EMAN, E. L., 69-3193
MAN, R. J., 69-891
SOVA, M. M., 69-2649, 3613
STOV, P. P., 69-3477
CHER, A. G., 69-2817
CHER, G., 69-1804
CHER, K. F., 69-1027, 1028, 991
CHER, R. P., 69-1103, 2945
HER, D. E., 69-2240, 3131, 3190, 194
HER, D. J., 69-2313
HER, F. S., 69-1103
HER, G. W., 69-3201
HER, K., 69-3037
HER, R. V., 69-2555, 3355
HMAN, M. J., 69-1850
IE, R. S., 69-1666
TE, P., 69-3228
MINI, A., 69-1509
NAGAN, F. J., 69-1277, 1881, 382, 2221
NTSBAUM, I. M., 69-2297
ET. M. E., 69-51, 2091
GMANN, A. W., 69-2824
ISCH, H., 69-2087
ISCHER, M., 69-374, 1276, 1300, 331, 3070, 3089, 3320
ISCHER, R. L., 69-487, 958, 720
FLEMING, P. D., 69-2600
FLEMING, S. J., 69-22
FLETCHER, K., 69-3162
FLINN, D., 69-909
FLOOD, H., 69-1175
FLORENSKIY, K. P., 69-344
FLORES, J., 69-3080
FLÖRKE, O. W., 69-1465
FLOYD, P. A., 69-359, 421, 1296, 1297
FLÜGEL, E., 69-2513
FLÜGEL, H. W., 69-2513
FOEX, M., 69-280
FOGEL'MAN, N. A., 69-2943
FOISSY, B., 69-368, 1115, 1772
FOJT, B., 69-247
FÖLDVÁRI, A., 69-1681, 1682
FÖLDVÁRI-VOGL, M., 69-1288
FOLK, R. L., 69-3482
FOLLAND, C. J., 69-116
FOLLETT, E. A. C., 69-83
FOLSOM, T. R., 69-1354
FONTAINE, H., 69-3422
FONT-ALTABA, M., 69-1196
FONTBOTÉ, J.-M., 69-789, 812
FONTEILLES, M., 69-798
FONTES, J.-C., 69-1326, 1350, 1382, 3152
FOOKES, P. G., 69-3492
FOOSE, R. M., 69-1611
FORBES, F., 69-3037
FORBES, R. B., 69-1651
FORD, A. B., 69-2662
FORD, R. J., 69-616, 1520
FORD, R. W., 69-2824
FORD, T. D., 69-772, 2515, 2818, 3616
FOREMAN, D. W., *Jr.*, 69-1198, 2102
FORESTIER, F.-H., 69-3366
FORMAN, S. A., 69-1453
FORNASERI, M., 69-614, 1293, 3116
FORSTÉN, J., 69-2044
FORSTER, A., 69-3391
FÖRSTER, H., 69-1842
FOSTER, H. L., 69-1651, 3627
FOSTER, M. D., 69-1455
FOSTER, P. A., 69-301
FOSTER, R. L., 69-1105, 2569
FOUCHÉ, K. F., 69-2236
FOURNIER, R. B., 69-2406
FOURNIER, R. O., 69-2507
FOX, K. F., *Jr.*, 69-2041
FRANCIS, E. H., 69-910, 3364
FRANCOIS, B., 69-279
FRANÇOIS, J., 69-1285
FRANK, D. J., 69-3159
FRANKEL, J. J., 69-630
FRANKLIN, A. D., 69-1031
FRANKS, G. D., 69-1697
FRANTSESSON, E. V., 69-685
FRANZ, H. E., 69-2513
FRANZINI, M., 69-2315, 2439, 2901
FRASER, A. R., 69-2834
FRAZER, J., 69-2084
FRAZER, J. Z., 69-3177
FREDRIKSSON, K., 69-3181
FREED, R. L., 69-2892
FREIRE D'ANDRADE, R., 69-1116
FREISER, H., 69-55
FRENZEL, G., 69-2385
FRESHNEY, E. C., 69-1566
FREY, F. A., 69-1303
FREY, M., 69-1694
FREYHOLD, O. M. VON, 69-1407
FRIDLAND, V. M., 69-2181
FRIEDMAN, G. M., 69-2513, 2534
FRIEDMAN, I., 69-1664, 2149, 3055, 3522
FRIEND, P. F., 69-1671
FRIETSCH, R., 69-2029
FRIPIAT, J. J., 69-2824, 2885
FRISHMAN, S. A., 69-1688
FRITSCH, W., 69-2573
FRITSCHE, J., 69-3348
FRITZ, P., 69-1382
FRIZ, C., 69-808
FRODESEN, S., 69-1559
FROESE, E., 69-1188, 1189
FRÖHLICH, F., 69-1065
FROLOVA, K. E., 69-2862
FRONDEL, C., 69-307, 308, 600, 619, 1254, 2289, 2383, 3271
FROST, I. C., 69-1334, 2210
FROST, J. E., 69-2019
FRUEH, A. J., *Jr.*, 69-148, 1073
FRYE, J. C., 69-1000
FUCHS, L. H., 69-2392, 3351
FÜCHTBAUER, H., 69-2513
FUGE, R., 69-1283, 2270, 3095
FUJII, N., 69-2631
FUJIMORI, S., 69-883
FUJISAWA, H., 69-2631
FUNKHOUSER, J. G., 69-912
FURBISH, W. J., 69-1430
FURIA, E. DI, 69-229
FURMAKOVA, L. N., 69-281
FURMAN, S. R., 69-2680
FURSOV, V. Z., 69-3167
FÜRST, I., 69-1009
FURTADO, A. F. A. SANCHES, 69-1010
FURUKAWA, M., 69-3184
FURUTA, T., 69-962
FUSE, K., 69-3180
FÚSTER, J. M., 69-1567, 1569
FÚSTER CASAS, J. M., 69-660, 663, 664
FUTERGENDLER, S. I., 69-560, 2909

GABE, H. J., 69-1225
GABLE, D. J., 69-721, 2608
GABUDA, S. P., 69-2903
GAD, M. A., 69-3112
GADEL, F., 69-3114
GADÓ, P., 69-32
GAGER, H. M., 69-1161
GAINES, R. V., 69-620, 2396
GAIR, J. E., 69-1606, 3592
GAJDA, E., 69-568
GAKIEL, U., 69-2377
GALE, N. H., 69-906, 1810
GALETSKIY, L. S., 69-3318
GALIMOV, E. M., 69-343
GALKIN, M. A., 69-2963
GALLAGHER, K. J., 69-1182
GALLI, M., 69-2434, 3108, 3301
GALLON, T. E., 69-3608
GALLONI, E. E., 69-190
GALLOWAY, J., 69-2173
GALVÁN GARCÍA, J., 69-870
GALY, J., 69-1068
GAMOW, G., 69-886
GANAPATHY, R., 69-3179
GANDOLFI, G., 69-2760, 2761, 3381, 3385, 3386
GANGULY, J., 69-2107
GANOR, E., 69-444
GANSSER, A., 69-809
GANZEYEV, A. A., 69-3300
GARAVELLI, C. L., 69-1516, 2762, 3498
GARBARINO, C., 69-3377
GARCEAU, G. A., 69-641
GARCÍA, A., 69-660
GARD, J. A., 69-83, 3346
GARDNER, L. S., 69-2036, 2039
GARIFULIN, L. L., 69-1718
GARLAND, G. D., 69-2703
GARNIER, G., 69-26
GARRELS, R. M., 69-3071
GARRISON, R. E., 69-2546, 2817
GASKILL, D. L., 69-2476
GASKIN, A. J., 69-340
GASPARYANTS, N. R., 69-2099
GASS, I. G., 69-629
GAST, P. W., 69-630, 1629
GASTESI, P., 69-761, 1569, 1571
GAUDEFROY, C., 69-621, 1461, 1769, 3347
GAULT, D. E., 69-2706
GAUSTAD, J. E., 69-2709
GAUTHIER, J., 69-406, 2868
GAVRILIN, R. D., 69-375
GAVRILOVIČ, J., 69-963, 1838
GAY, P., 69-3046
GAYER, R. A., 69-626
GAZZARRINI, F., 69-2060
GEE, D. G., 69-626
GEFFROY, J., 69-559, 1502, 2979, 3228, 3329
GEIJER, P., 69-2028, 2030
GEIS, H. P., 69-3545
GEITGEY, R. P., 69-1514
GELSTHORPE, J. R., 69-280
GENDELEV, S. SH., 69-831
GENNESSEAUX, M., 69-646
GERASIMOVA, E. T., 69-2530
GERASIMOVSKIY, V. I., 69-380, 635
GERLING, E. K., 69-447, 485, 1258, 2731, 2741
GERLOFF, U., 69-3195
GEVORK'YAN, V. KH., 69-1767
GHEORGHITÁ, I., 69-3390
GHERASI, N., 69-3390
GHERGARIU, L., 69-1005
GHEZZO, C., 69-1641, 3387
GHOSE, N. C., 69-3415, 3583
GHOSH, A. K., 69-3087
GHOSH, R. N., 69-3321
GHOSH, S. K., 69-3574
GIACOVAZZO, C., 69-2762, 2931
GIBB, F. G. F., 69-502, 2414
GIBBS, G. V., 69-136, 138, 2889, 2893, 2898, 2905, 3203
GIBSON, I., 69-3473
GIBSON, I. L., 69-677
GIDSKEHAUG, A., 69-863
GIES, H., 69-2401
GIESE, P., 69-1742
GILBERT, C. M., 69-2406
GILCHRIST, J., 69-3198
GILINSKAYA, L. G., 69-2922
GILKES, R. J., 69-112
GILLATT, N., 69-234
GIRARDET, J.-L., 69-1067
GIRAUD, A., 69-394
GIRAUD, P., 69-804
GIRAUD, R., 69-562, 617
GIRAULT, J., 69-716, 2213, 3429
GIRDLER, R. W., 69-1787, 1789
GIRESSE, P., 69-538
GITTINS, J., 69-2318
GIUŞCĂ, D., 69-3390
GIUSEPPETTI, G., 69-3065
GIUSTA, A. D., 69-935, 1030, 1413
GJEMS, O., 69-1939
GLADKIKH, V. S., 69-379, 628, 1642
GLADYSHEVSKAYA, N. N., 69-1585
GLAESER, R., 69-2846, 2847
GLASS, B., 69-3197
GLASS, H. D., 69-1000
GLAUSER, E., 69-923
GLEBOVSKAYA, V. S., 69-431
GLOVER, J. E., 69-768, 3507
GLUSHKOVA, T. M., 69-2649
GLUSKOTER, H. J., 69-1341

Goddard, E. N., 69-2957
Godovikov, A. A., 69-1749, 2922, 3015, 3026, 3030
Godwin, L. H., 69-2476
Goglev, V. S., 69-440
Goguel, J., 69-2695
Göhring, K. E. H., 69-409
Gokhale, N. W., 69-1631, 3267
Gold, D. P., 69-2196
Goldberg, E. D., 69-2173
Goldin, B. A., 69-381, 3219
Gol'dshmidt, E. Kh., 69-2941
Goldstein, M., 69-1754
Goldsztejn, M., 69-70
Goleva, G. A., 69-434, 435
Golightly, J. P., 69-1073
Golovanov, I. M., 69-223
Golovastikov, N. I., 69-1044
Goncharov, Yu. I., 69-2205, 2209
Gonfiantini, R., 69-3152
Goni, J., 69-2340
González García, S., 69-2828
Goode, A. D. T., 69-698
Goodspeed, R. M., 69-2605
Goodwin, A. M., 69-1552
Goodwin, J. W., 69-2824
Gopalan, K., 69-3175
Gorbatschev, R., 69-2514
Gorbatyi, L. V., 69-2926
Gorbunov, L. V., 69-1205
Gordillo, C. E., 69-728, 729
Gordiyenko, V. V., 69-3279
Gordon, R. B., 69-3187
Gorev, A. V., 69-430
Gorman, H., 69-2090
Goroshchenko, Ya. G., 69-1204
Goroshnikov, B. I., 69-1459
Goroshnikov, V. I., 69-521
Gorova, M., 69-1517
Gorovoy, A. F., 69-1128
Gorshkov, A. I., 69-2302, 2332
Gorshkova, E. R., 69-2458
Goryainov, I. N., 69-2012
Gorzhevskiy, D. I., 69-2943
Górzyński, Z., 69-1331
Gosse, R., 69-1246
Goto, Y., 69-2322
Gott, G. B., 69-1386, 2002
Gottardi, G., 69-508, 1426, 1950
Gottfried, D., 69-382, 1294, 2163, 2165, 2166
Gow, A. J., 69-709
Gower, H. D., 69-2542
Graef, M., 69-2069
Graeser, S., 69-12, 533, 1272
Graf, D. L., 69-1966
Graham, A. L., 69-3104
Graindor, M.-J., 69-652
Gramont, X. de, 69-562, 633, 869, 3077
Grandi, L., 69-3116
Grandjacquet, C., 69-3561
Granger, H. C., 69-1777, 1779, 1813, 2947, 2980
Granger, M.-M., 69-621
Granquist, W. T., 69-552
Grantz, A., 69-2469
Grashchenko, S. M., 69-2201, 2202
Grasty, R. L., 69-862, 2658
Graves, M. L., 69-1302
Green, D. H., 69-630, 725
Green, J. C., 69-1610
Green, R. C., 69-468, 722
Green, T. H., 69-1218, 1414
Greenland, D. J., 69-93
Greenland, L., 69-2235
Greenland, L. P., 69-382, 1294, 1379, 2805, 3103
Gregnanin, A., 69-2264
Gregor, B., 69-3145
Gregora, I., 69-1737
Greig, D. C., 69-640
Grender, G. C., 69-2905
Greskovich, C., 69-288
Gribble, C. D., 69-1561
Gribov, E. M., 69-1940
Griffin, W. L., 69-3283
Griffith, W. P., 69-3607
Griffiths, D. L., 69-2824
Griffitts, W. R., 69-1263, 2158, 2159, 2228
Grigor'ev, D. I., 69-134, 1056
Grigoriev, D. P., 69-1199
Grim, R. E., 69-102
Grimaldi, F. S., 69-945, 949, 1851, 2785, 2786
Grimes, D. J., 69-74
Grinenko, L. N., 69-458, 1273
Grinenko, V. A., 69-389, 410, 425, 458, 490, 1158, 1273
Grivakov, A. G., 69-3299
Grocholski, W., 69-675
Gross, E. B., 69-2329
Grossman, I. G., 69-2990
Grover, J. E., 69-2151
Groves, D. I., 69-2955
Grubb, P. L. C., 69-878, 1479
Grubessi, O., 69-3388
Grum-Grzhmailo, S. V., 69-2269, 2644
Grundy, H. D., 69-2121
Grünenfelder, M., 69-15
Grushkin, G. G., 69-793
Gruza, V. V., 69-1643
Gruzdev, V. S., 69-540
Gruz Gaspar, O. da, 69-2971
Grybeck, D., 69-1491
Gryn'kiv, Z. S., 69-1298
Guasparri, G., 69-1641
Gübelin, E., 69-3062
Gude, A. J., 69-2319, 2554
Gude, A. J., *3rd*, 69-615, 788
Gueibard, S., 69-645
Guest, J. E., 69-1615, 1796
Guha, P. K., 69-3308, 3466
Guidotti, C. V., 69-537, 826, 2288
Guigues, J., 69-1513
Guilbert, F., 69-1493
Guillemant, A., 69-1879
Guillou, J.-J., 69-2001
Guinot, B., 69-2702
Guitard, G., 69-798, 2581, 3530, 3548
Gulbrandsen, R. A., 69-1146, 2541
Gulyanitskaya, T. P., 69-437
Gumbar, K. K., 69-50
Guney, M., 69-2967
Gunn, B. M., 69-2500
Guppy, E. M., 69-1310
Gupta, D., 69-2840
Gupta, L. N., 69-3467
Gupta, M. P., 69-1039
Gurevich, M. G., 69-349
Gurney, J. J., 69-3223
Gurova, E. P., 69-2205
Gus'kova, A. N., 69-350
Guth, J.-L., 69-2775
Gutiérrez, M., 69-2633
Gutt, W., 69-1200
Guyot, J., 69-40, 1930, 2878
Gwinner, M. P., 69-2513
Gwóźdź, R., 69-775
Gysin, M., 69-2590

Haack, U. K., 69-3269
Häberle, H., 69-3273
Hacker, J. L. F., 69-893
Haefner, R. C., 69-1464
Haffty, J., 69-973
Hafner, S., 69-133
Haggerty, S. E., 69-2658
Hahn, T., 69-1975
Hains, B. A., 69-640, 1673
Hajdu-Molnár, K., 69-1681
Häkli, T. A., 69-1536, 3227
Halbach, P., 69-1336
Hall, A., 69-2777, 3094
Hall, B. R., 69-116
Hall, W. E., 69-974
Hallam, A., 69-1677
Hallberg, R. O., 69-2140
Hamaguchi, H., 69-3184
Hameurt, J., 69-2417
Hamilton, D. L., 69-630, 1231, 2119
Hamilton, J. C., 69-1136, 1262, 1280
Hamilton, W., 69-2210, 2471, 2472
Hammerbeck, E. C. I., 69-3409
Han, J., 69-3126
Handa, B. K., 69-3122, 3157
Hanisch, K., 69-1979, 2646
Hannaford, P., 69-1479
Hannak, W., 69-221
Hanor, J. S., 69-594, 3147
Hanshaw, B. B., 69-2094
Hanuš, V., 69-3454
Hapuarachchi, D. J. A. C., 69-1720
Haque, I., 69-1144
Hara, M., 69-2325
Harada, K., 69-1454, 2325, 2326
Hardie, L. A., 69-1324
Harding, R. R., 69-902
Hardy, E. P., 69-342
Hariss, R. C., 69-1319
Harland, W. B., 69-626, 893
Harms, T. F., 69-2789
Harnum, E. G., 69-2682
Harre, W., 69-908
Harrington, H. J., 69-712
Harris, D. C., 69-959, 1492, 1605, 1773, 1783, 2386
Harris, J., 69-3061
Harris, J. R., 69-3033
Harris, P. G., 69-2135
Harron, B., 69-275
Harshman, E. N., 69-1269, 2007
Hart, S. R., 69-1804
Hartman, P., 69-3208
Harvey, R. D., 69-2996
Harzdorf, C., 69-2781
Hasegawa, M., 69-1873
Hashimoto, M., 69-2259
Haskin, L. A., 69-1303
Haskin, M. A., 69-1303
Haslam, H. W., 69-638
Hata, A., 69-1873
Hata, T., 69-1875
Hathaway, B. J., 69-2648
Hathaway, J. C., 69-2832
Hatherton, T., 69-1657
Hattori, H., 69-824
Haute, H., 69-586
Havens, R. G., 69-2268, 2675
Hawkes, J. E., 69-1566
Hawkes, J. R., 69-1634, 2989
Hawkins, B. W., 69-240
Hawley, C. C., 69-260, 1263, 1280, 2948
Haworth, H. F., 69-2036
Hay, R. L., 69-1695, 2406
Hayami, R., 69-1169
Hayes, D. E., 69-2700
Hayes, J. B., 69-1923
Hayes, P. T., 69-2210
Heald, E. F., 69-2046
Healing, R. A., 69-1021
Hedge, C. E., 69-901, 2498
Heezen, B. C., 69-3197
Heflik, W., 69-2263
Heide, F., 69-488
Heidenreich, R. D., 69-41
Heier, K. S., 69-1344, 2317,
Heimlich, R. A., 69-1604
Heinrich, E. W., 69-2567
Heirtzler, J. R., 69-2819
Heizmann, J.-J., 69-835, 359
Held, S., 69-54
Helgeson, H. C., 69-347, 307
Heling, D., 69-2513
Hellner, E., 69-164
Helz, A. W., 69-1887
Hem, J. D., 69-1194, 1225
Hemley, J. J., 69-1448
Henbest, L. G., 69-784
Henderson, C. M. B., 69-174 2153
Henderson, P., 69-362
Hendricks, R. W., 69-36
Hénin, S., 69-2132
Herdrick, M. A., 69-2948
Heritsch, H., 69-671, 3618
Herm, D., 69-3511
Hernández-Pacheco, A., 69 1572
Herreid, G., 69-2225
Herrington, D. R., 69-2046
Herrmann, A. G., 69-1304
Herve, A. de G. de, 69-649.
Herz, N., 69-2178
Herzenberg, C. L., 69-2925
Herzog, E., 69-585
Hess, E., 69-2881
Hess, H. H., 69-630
Hess, W. M., 69-41
Hessin, T. D., 69-265, 462
Hetman, J. S., 69-47, 2776, 2812
Hewett, D. F., 69-1512
Hey, M. H., 69-526, 610, 2272, 2371, 2396, 3315
Heydemann, A., 69-95
Heyl, A. V., 69-2142, 2339
Heymann, D., 69-475, 1403
Hieke Merlin, O., 69-2437,
Hiemstra, S. A., 69-2748
Hieronymus, B., 69-1150
Hietanen, A., 69-780, 2607
Hildebrand, F. A., 69-2268, 2468
Hill, J. A., 69-1142
Hill, V. G., 69-3005
Hiller, J. T., *Jr.*, 69-881
Hiller, K., 69-2513
Himmelberg, G. R., 69-917, 3202, 3254
Hinkle, M., 69-948
Hinrichsen, T., 69-1213, 2111
Hirao, Y., 69-3184
Hirschberg, A., 69-1215
Hitchen, C. S., 69-676
Hitchon, B., 69-400, 2203
Hlabse, T., 69-310
Hoare, J. M., 69-2320, 2406
Hodge, P. W., 69-3196
Hodgson, G. W., 69-400, 308
Hoefs, J., 69-1272, 1295
Hoffer, J. M., 69-548, 918
Hofmaier, G., 69-280
Hofmann, R., 69-2148, 3216
Högberg, E., 69-1833
Hohnke, D., 69-1060
Holden, G. R., 69-2793

IDGE, D. A., 69-2872
R., 69-204
ND, A. E., 69-305
ND, H. D., 69-348, 1323
ND, J. G., 69-1563
R, H., 69-1203
DAY, D. W., 69-1689
NGWORTH, S. E., 69-2415
LOP, J. F., 69-230
VSKA, B., 69-63
ER, H., 69-1020
A, R. M., 69-2383
, S., 69-2817
OREZ, J., 69-3375
ER, P. R., 69-2794
ER, D. L., 69-2816
OOD, A. M., 69-3363, 3585
INS, J. C., 69-704
OOD, T., 69-1616
, P., 69-2619
E, R. R., 69-711
EMANN, U., 69-1160
UNG, G., 69-2390
HEK, G., 69-1214
ERMAN, J. W., 69-2142, 2367, 9, 2870
ETLER, P. B., 69-299, 2756, 2
INGER, L., 69-1798, 2711
, P. E., 69-2252
SLOW, A. W., 69-1605, 3317
T, R., 69-2755, 3000
E, R., 69-2306
TON, R. S., 69-1814
IE, R. A., 69-1433, 2272, 3362
ITT, F., 69-3143
LE, F., 69-471
KEVICH, M. E., 69-2466
H, S., 69-2803
K. J., 69-1551
BARD, F. H., 69-3280
BARD, W. F., 69-1761
ERT, A. E., 69-3090
NER, H., 69-2033, 2490
NER, M., 69-92
SON, D. R., 69-787
BNER, J. S., 69-3031
FMAN, C. *Jr.*, 69-58, 951, 1280, 34, 1852, 2162, 2177, 2808, 60
O, P. J., 69-2712, 2939
O, P. L. V., 69-2939
BERT, S. F., 69-3043
TIN, I., 69-1478
L, K., 69-118
AHASHI, M., 69-1548
T, C. B., 69-913, 2184
TER, R. E., 69-2550, 2772
ZIKER, J. C., 69-12
LBUT, C. S., *Jr.*, 69-555, 605, 94, 2395, 3066
LEY, P. M., 69-1801, 2715, 19
AIN, B., 69-3465
CHISON, R., 69-1638
CHISON, W. W., 69-1449
TON, J. T., 69-2795
ELIN, P., 69-273
NH, C. T., 69-77

OVIC, V., 69-1260
OVICI, V., 69-1088, 1307, 1335, 05, 1716, 3390
ROLA, E., 69-664, 1567
HIM, M. A., 69-1490
AYEV, R. A., 69-399
H, K., 69-2627
MA, A., 69-2406
MA, J. T., 69-545
NIKOVA, N. YU., 69-2078

IKORSKIY, S. V., 69-496
ILER, R. K., 69-335
ILIEV, Z., 69-3312
IL'IN, A. V., 69-2508
IL'INSKAYA, E. A., 69-431
ILYUKHIN, V. V., 69-1735, 1972, 2926
INESON, P. R., 69-3163
INGAMELLS, C. O., 69-1427, 2318
INGRAM, B. L., 69-974, 1777, 1853
IONESCU, C., 69-1335, 1716
IOVCHEVA, E. I., 69-361
IRELAND, J. G., 69-476
IRION, G., 69-1768, 2513
IRVING, E., 69-2819
IRWIN, W. P., 69-1726, 1815
ISACKS, B., 69-2699
ISETTI, G., 69-1043
ISHIKAWA, F., 69-2282
ISHIKAWA, H., 69-370
ISKANDEROVA, A. D., 69-1823
ISNARD, P., 69-1286
ISOBE, K., 69-2294
ISSAKHANIAN, V., 69-1502
ITO, J., 69-296, 307, 308, 528, 600, 2104, 2105, 2289
ITTYACHEN, M. A., 69-830
IVANOV, D. N., 69-2152
IVANOV, R., 69-1550
IVANOV, S. N., 69-2934
IVANOV, T., 69-2382
IVANOVA, G. F., 69-1135, 1253
IVCHINOVA, L., 69-3312
IVKIN, I. M., 69-2833
IVLEV, V. F., 69-2903
IWAO, S., 69-1018
IWASAKI, I., 69-1854
IZAWA, E., 69-2597
IZETT, G. A., 69-1425, 2482, 2568

JACKSON, E. D., 69-917, 1628, 1665, 2252, 2349
JACKSON, M. L., 69-49, 69-315
JACOB, C., 69-586
JACOBS, H., 69-2885
JACOBS, T., 69-2839
JACOBSON, H. S., 69-2961
JAEGER, J. C., 69-630
JAEGER, R. R., 69-479
JAFFE, H. W., 69-3253
JAFFE, L. D., 69-2706
JAHANBAGLOO, I. C., 69-3200
JAKEŠ, P., 69-2275
JAMBOR, J. L., 69-1417, 1522, 1523, 1534, 1535, 2260, 2351, 2384, 2386, 3334
JAMES, R. S., 69-2119
JANOT, C., 69-585
JARCHOW, O., 69-176, 2125
JARKOVSKÝ, J., 69-1264, 2144
JAROSEWICH, E., 69-644, 2238
JARZEBOWSKA, J., 69-1855
JASMUND, K., 69-670
JAUZEIN, A., 69-2214
JAZOULI-BAHRAOUI, J., 69-1888
JEANS, C. V., 69-109
JEFFERY, J. W., 69-2067
JEFFERY, P. G., 69-571
JENKINS, L. B., 69-1867
JENNE, E. A., 69-398
JENNINGS, D. S., 69-3361
JENNINGS, I. B., 69-1995
JENSEN, M. L., 69-1546
JIPA, D., 69-3486
JOENSUU, O., 69-104, 2856
JOENSUU, O. I., 69-1427
JOHAN, Z., 69-2337, 2389, 3326
JOHANNES, W., 69-1192, 1210, 1856, 2069, 2070, 2129, 3032

JOHN, Y. W., 69-3215
JOHNSON, A. I., 69-1831
JOHNSON, G. G., 69-2361
JOHNSON, G. R., 69-2635
JOHNSON, H., 69-2105
JOHNSON, J. E., 69-489
JOHNSON, J. G., 69-2819
JOHNSON, P. W., 69-1155, 3069
JOHNSON, R. B., 69-720
JOLLY, J. L., 69-2142, 2339
JONES, B. F., 69-1868
JONES, C. L., 69-2537
JONES, D. L., 69-2541, 2660
JONES, F. T., 69-919
JONES, J. B., 69-3297
JONES, J. G., 69-3480
JONES, J. M., 69-940
JONES, K. S., 69-1355
JONES, L. M., 69-1511
JONES, M. A., 69-1903
JONES, M. P., 69-963, 1838
JONES, N. W., 69-2254, 3203
JONES, O., 69-293
JONES, O. A., 69-1106
JONES, R. S., 69-2231, 3089, 3102
JOO, J., 69-2042
JORGENSEN, P., 69-1915
JORGENSEN, P. J., 69-2621
JOSHI, M. S., 69-829, 830
JOST, H., 69-2486
JOTRAVSKY, G., 69-1098, 1544
JOURDE, G., 69-1595
JOUSSELIN, C., 69-48
JUAN, V. C., 69-1232
JUDE, R., 69-3390
JUNG, W., 69-3497
JUNGE, C. E., 69-1554
JURAIN, G., 69-2814
JUSTE, C., 69-1330
JUSTIN-VISENTIN, E., 69-3210
JUTSUM, P. J., 69-938

KABANOVICH, I. V., 69-281, 2307
KABOLOV, YU. K., 69-3224
KACHADOORIAN, R., 69-218
KADER, Z. A., 69-3405
KAGAN, M. S., 69-1357
KAGAYA, B., 69-3057
KAIMAN, S., 69-620
KALABINA, M. G., 69-2941
KALASHNIKOV, YA. A., 69-1165
KALENOV, A. D., 69-2035, 2462
KALICHEV, I. S., 69-71
KALININ, D. V., 69-304, 1206, 1209, 2123
KALININ, E. P., 69-381, 3219
KALINKIN, M. M., 69-682
KALMAN, Z. H., 69-166
KALOKERINOS, A., 69-1244
KALT, A., 69-3039, 3040
KALUGIN, A. S., 69-2526
KALYANARAMAN, A. R., 69-124
KALYUBA, T. M., 69-3092
KALYUZHNYY, V. A., 69-1298
KAMB, B., 69-1042
KAMENEV, E. A., 69-682
KAMENTSEV, I. E., 69-3279
KAMIGAICHI, T., 69-2651
KAMINSKAYA, A. B., 69-1159
KAMLA, P., 69-950
KANAMORI, H., 69-2626, 2631
KANEHIRA, K., 69-1134, 1603, 2282
KANO, S., 69-2092
KANWAR, R. C., 69-3440, 3576, 3625
KAPLAN, G., 69-1, 2719
KAPLAN, I. R., 69-1320, 2173
KAPOOR, B. S., 69-89
KARADZHOVA, B., 69-506

KARAKAS, E., 69-774
KARAKIDA, Y., 69-2463
KARAPETOVA, G. I., 69-2169
KARCHE, J. P., 69-1519, 1592, 2449
KARDYMOWICZ, I., 69-1584
KARKARE, S. G., 69-3542
KARPOV, P. A., 69-3502
KARPOVA, G. V., 69-2293, 2865
KARPUSHINA, V. A., 69-380
KARTENKO, N. F., 69-1466
KARYAKINA, T. A., 69-3601
KARZHAUV, T. K., 69-405
KASAHARA, K., 69-316
KASHAEV, A. A., 69-1987, 2896, 2897
KASHCHEEVA, T. V., 69-925, 3078
KASHCHENKO, S. A., 69-1321
KASHIRIN, K. F., 69-376
KASHIRTSEVA, M. F., 69-1102
KASHKUROV, K. F., 69-281, 2058, 2617
KASHTAN, M. S., 69-78, 431
KASHTANOV, M. S., 69-1935
KASTNER, M., 69-2314
KATAEVA, Z. T., 69-1539, 3300
KATAJA, M., 69-1536
KATS, M. YA., 69-3293
KATZ, A., 69-783
KATZ, J. L., 69-123
KATZ, M. B., 69-1724
KATZ, S., 69-2073
KAUFMAN, A., 69-3148
KAUTZ, K., 69-1938, 2287, 2359
KAVKA, J., 69-2446
KAY, M., 69-2819
KAYE, C. A., 69-2543
KAYE, M., 69-2168
KAYS, M. A., 69-718
KAYUPOVA, M. M., 69-556
KAZAKOV, G. A., 69-20
KAZAKOVA, M. E., 69-3352
KAZARYAN, A. G., 69-3447
KEARY, R., 69-771
KEAYS, R. R., 69-2803
KEEN, I. M., 69-314
KEESTER, K. L., 69-2361
KEIL, K., 69-2800, 3176, 3177
KEITH, T. E. C., 69-2267, 3284
KELLARD, P. O., 69-3614
KELLER, F., 69-3563
KELLER, G. H., 69-3596
KELLER, W. D., 69-319
KELLEY, V. C., 69-1609
KELLY, W. C., 69-2957
KEMPE, D. R. C., 69-525, 526, 1719, 3257
KENNARD, O., 69-2763
KEOWN, S. R., 69-44
KEPEZHINSKAS, K. B., 69-540, 3272
KEPPLER, U., 69-1978, 2103
KERBE, F., 69-280
KERJEAN, M., 69-368
KERN, H., 69-982, 3049
KERN, R., 69-827
KERNS, R. L., *Jr.*, 69-1911
KERR, P. F., 69-1118
KERRIDGE, J. F., 69-492
KESHISHYAN, G. O., 69-431
KESLER, S. E., 69-747, 2167
KETNER, K. B., 69-462, 2040, 3509
KETSKHOVELI, D. N., 69-3396
KHADZHI, V. E., 69-2998
KHAN, S., 69-1001
KHANDELWAL, S., 69-996
KHARITONOV, A. N., 69-1270
KHARITONOV, YU. A., 69-1949
KHASIN, R. A., 69-2035

Khatelishvili, G. V., 69-2909
Khazov, R. A., 69-1113
Kheiker, D. M., 69-2297
Khetchikov, L. N., 69-350, 2099
Khitarov, N. I., 69-351, 1156, 1172
Khitrov, L. M., 69-396
Khlestov, V. V., 69-3141
Khlopina, T. N., 69-76
Khmelevskaya, I. M., 69-3078
Khodak, Yu. A., 69-1940
Khodakovskiy, I. L., 69-1253
Khomichev, V. L., 69-356
Khoreva, B. Ya., 69-3539
Khoroshilova, L. A., 69-1539
Khorvat, V. A., 69-223
Khotimchenko, V. C., 69-1221
Khotina, M. I., 69-3213
Khrenov, P. M., 69-1997
Khvorova, I. V., 69-3485
Khvostova, V. A., 69-1485
Kidzus, M. F., 69-2673
Killsgaard, T. H., 69-2145
Kim, C. W., 69-1548
Kim, E. P., 69-3619
Kimpe, C. de, 69-2877
Kimura, H. S., 69-1008
King, H. G. C., 69-1857, 2827
King, L. H., 69-1318
King, R. J., 69-2515, 2665
King, R. U., 69-2568
King, W. J., 69-314
Kingery, W. D., 69-279
Kinkel, A. R., *Jr.*, 69-3155
Kinney, D. M., 69-2568
Kinsman, D. J. J., 69-1323
Kireyev, A. D., 69-2170
Kirk, J. L., 69-847, 3603
Kirsch, H., 69-983, 2185, 2409
Kisch, H. J., 69-3246
Kiselev, G. N., 69-584
Kiseleva, I. A., 69-355
Kislitsina, G. I., 69-384
Kiss, E., 69-725
Kissen, I. G., 69-438
Kistler, R. W., 69-2816
Kitchener, J. A., 69-2824
Klassova, N. S., 69-375
Kleber, W., 69-1180
Kleeman, A. W., 69-752
Kleiber, J., 69-1772
Klein, C., 69-3252
Klein, C., *Jr.*, 69-528, 2279, 3253
Klein, E., 69-185
Kleinkopf, K., 69-3165
Klement, W., 69-1468
Kleppa, O. J., 69-310
Klepper, M. R., 69-2406
Kleshchev, G. V., 69-281, 2307
Klevtsova, R. F., 69-2895
Kliburszky, B., 69-1009, 1207
Klier, K., 69-1237
Klusman, R. W., 69-2216
Klyarovskiy, V. M., 69-352
Klyen, L. E., 69-443
Klyucharov, Ya. V., 69-286
Knapp, W. J., 69-1175
Knauer, E., 69-2670
Knechtel, M. M., 69-2194
Knill, J. L., 69-1355
Knoke, R., 69-1337
Knop, O., 69-1490
Knoring, L. D., 69-2512
Knorre, K. G., 69-20
Knorring, O. von, 69-581, 2363
Knowles, P. H., 69-198
Knox, A., 69-867
Knyazev, V. S., 69-2735
Kobashi, T., 69-1917
Kobe, H. W., 69-1763
Koch, H. P., 69-1835
Koch, K., 69-3521
Kochenov, A. V., 69-402, 1311, 3154
Kochetkov, O. S., 69-1346
Kodama, H., 69-115, 179, 1453, 1454
Koenigswald, G. H. R. von, 69-497
Koga, A., 69-441, 442
Kogarko, L. N., 69-3169
Kojima, G., 69-2506
Kokotailo, G. T., 69-160
Kokta, J., 69-1380
Kolbe, P., 69-3358
Kolesnikova, V. V., 69-3245
Kolesov, G. M., 69-71
Kolesova, R. V., 69-1976, 2928, 2929
Kolodieva, S. V., 69-3613
Kolodny, L., 69-326
Komarov, A. N., 69-386, 485, 1258
Komarov, P. V., 69-2736
Kondratiyeva, D. N., 69-1462
König, G., 69-887
König, von U., 69-172
Kononov, O. V., 69-3532
Konopicky, K., 69-280
Konovalov, I. V., 69-2966
Konta, J., 69-2857, 2858, 2859, 3483
Kopecký, L., 69-673
Köppel, V., 69-15
Koptsik, V. A., 69-1944, 1948
Korczak, P., 69-155
Korikovskiy, S. P., 69-3565
Koritnig, S., 69-2376
Kormilitsyn, V. S., 69-2000
Kornilov, N. A., 69-1090, 2032, 2355
Kornilovich, I. A., 69-511
Kornprobst, J., 69-3051
Korolev, D. F., 69-2186
Korolev, Yu. M., 69-2833
Koroleva, N. N., 69-224
Koryakin, A. S., 69-3519
Kosals, Ya. A., 69-607
Koscelník, Š., 69-2859
Koschmann, A. H., 69-1994
Koshy, J., 69-2615
Kos'ko, M. K., 69-2152
Kostyuk, E. A., 69-1442, 2283
Kosyak, E. A., 69-612, 613
Koteneva, E. A., 69-224
Kotova, L. N., 69-1587
Kotru, P. N., 69-829
Kovách, Á., 69-1291, 3105
Kovalenko, G. V., 69-1751
Kovalenko, V. I., 69-360, 452, 3260
Kovaleva, S. A., 69-3154
Kovalishin, Z. I., 69-1298
Koyanagi, R. Y., 69-1666
Kraĭneva, É. P., 69-841
Králík, J., 69-249
Králová, M., 69-2258
Kramer, E., 69-3439
Krasheninnikov, G. F., 69-3484
Krasil'nikova, A. V., 69-3293
Krasintseva, V. V., 69-1360
Krasnov, E. G., 69-3092
Krause, H., 69-2334
Krausz, A. S., 69-275
Kraut, F., 69-2233, 2570
Kräutner, H., 69-1088
Kravchenko, A. F., 69-1749
Kravchenko, S. M., 69-628
Kravchinskiy, Z. Ya., 69-1371
Kraynov, S. R., 69-439, 2207
Krebs, H., 69-984
Krebs, W., 69-2513
Kreshtapova, V. N., 69-402
Krestin, E. M., 69-3595
Kretz, R., 69-1545
Krieg, G. W., 69-698
Kripanidhi, A., 69-3209, 3226
Krishnamurthy, P., 69-2995, 3235
Krishnan, A. A., 69-30
Krishnan, M. S., 69-3538
Krishna Rao, G., 69-3119
Krivenko, A. P., 69-3307
Krogh, T. E., 69-1801
Krogh-Moe, J., 69-193
Krohmer, P., 69-2844
Kropachev, A. M., 69-414
Kropacheva, T. S., 69-414
Kropotova, O. I., 69-389, 425, 490, 1158
Kruger, S. T., 69-475
Krumbein, W. E., 69-2513
Krummenacher, D., 69-17
Kruparz, H., 69-2982
Krutov, G. A., 69-3258
Krylov, A. Ya., 69-385, 2735
Krylova, T. A., 69-449
Krymskiy, V. M., 69-2454
Kubach, I., 69-1844
Kübler, B., 69-803, 2830, 3117
Kubler, M., 69-37
Kubo, Y., 69-156, 316
Kucherova, M. A., 69-350
Kudinov, V. M., 69-2098
Kudo, A. H., 69-1226
Kudryavtsev, A. S., 69-263
Kudryavtsev, V. A., 69-2273
Kukal, Z., 769-3499
Kukuĭ, A. L., 69-287
Kulagov, É. A., 69-1526, 3325
Kulbicki, G., 69-42
Kul'chitskiy, L. I., 69-1916
Kulik, E. Z., 69-428
Kulikov, A. A., 69-216
Kulikova, M. F., 69-2141
Kulish, E. A., 69-3444
Kulkarni, P. H., 69-209
Kullerud, G., 69-210, 3009
Kumar, R., 69-3537
Kumazawa, M., 69-1740
Kund, G. G., 69-76
Kuno, H., 69-630
Kunze, G., 69-131
Kupčik, V., 69-1960
Kuptsov, V. M., 69-384
Kurasawa, H., 69-2498
Kurat, G., 69-3181
Kuroda, P. K., 69-484
Kuroda, R., 69-2160
Kuroda, Y., 69-2253
Kurshakova, L. D., 69-507
Kurzweil, H., 69-2591
Kushiro, I., 69-681, 1217, 2115
Kuskov, N. N., 69-216
Kusnir, I., 69-237
Kuteynikov, E. S., 69-687
Kutoglu, A., 69-1958
Kuzel, H.-J., 69-2096
Kuz'min, É. A., 69-1972
Kuz'mina, E. A., 69-384
Kuz'mina, I. P., 69-3025
Kuznetsov, A. A., 69-683
Kuznetsov, V. A., 69-2057
Kuznetsov, V. G., 69-2524
Kuznetsova, I. K., 69-1586, 1648
Kuznetsova, S. V., 69-875
Kuznetsova, S. Ya., 69-635
Kužvart, M., 69-1015
Kvaček, M., 69-557, 1268
Kvenvolden, K. A., 69-3135
Kvitka, S. S., 69-2915
Kwak, T. A. P., 69-1723
Kyriazis, M. K., 69-2854

Labernadière, H., 69-2580
Labeyrie, J., 69-9, 18
Labhart, T. P., 69-1713
Labuz, A., 69-2677
Lachance, G. R., 69-2351, 2
Lachica, M., 69-598
Ladd, M. F. C., 69-126
Laduron, D., 69-3207
Laffaille, A., 69-2890, 2930
Laffitte, R., 69-2517, 2518
Lafont, D. S. de, 69-267
Lahav, N., 69-82
Lahiri, K. C., 69-781
Laitakari, A., 69-985
Lajoie, K. R., 69-2406
Lake, R. H., 69-43
Lakin, H. W., 69-59, 1121, 1858, 1860, 1871, 2175, 3090
Lakshmi Narayana Rao, S. 69-3471
Lal, D., 69-3174
Lal, R. K., 69-3588
Lalou, C., 69-18
LaMarche, V. C., *Jr.*, 69-169
Lambert, I. B., 69-1344
Lambert, J. L. M., 69-1925
Lameyre, J., 69-657, 1635, 34
Lamoreaux, R. D., 69-2925
Lancelot, J., 69-2773
Lancelot, Y., 69-3493
Landa, E. A., 69-2461
Landais, E., 69-1824
Landis, C. A., 69-3540
Lane, G., 69-3043
Langer, E., 69-208
Langer, L., 69-63
Langier-Kuźniarowa, A., 69-
Langmuir, D., 69-297, 3004
Langmyhr, F. J., 69-2782
Laniz, R. V., 69-1834
Lanphere, M. A., 69-1812, 18
Lanzavecchia, G., 69-2060
Lapadu-Hargues, P., 69-10
Lapides, I. L., 69-452
Lapierre, H., 69-3374
Lapinskaya, T. A., 69-2524
Lappalainen, R., 69-3278
Larimer, J. W., 69-481, 1220
Larrabee, D. M., 69-3593
Larson, E. E., 69-1754, 3610
Larson, R. R., 69-2799
Larsonneur, C., 69-3490, 349
Larumbe, F., 69-885
Lasnier, B., 69-2579
Lasserre, M., 69-900, 3402
Latypov, N. G., 69-2530
Laurent, Y., 69-611, 622, 1
2382
Lavrenko, E. I., 69-1416
Lavrukhina, A. K., 69-71, 14
Lawrence, J. J., 69-1067
Lawrence, L. J, 69-241, 242, 257
Lawson, D. E., 69-911
Lay, L. A., 69-1036
Lazarenko, E. K., 69-1050
Lazarenkov, V. G., 69-1744
Lazarev, K. F., 69-2201, 2202
Laz'ko, E. M., 69-203, 2405
Laz'kov, V. A., 69-460
Láznička, P., 69-563
Leake, B. E., 69-1441, 3243
Leal, G., 69-622
Learned, R. E., 69-2787
Leavens, P. B., 69-555, 609

AS, M. J., 69-750
DEV, B. A., 69-395
DEV, E. B., 69-351
DEV, V. I., 69-2137
DEV, V. S., 69-346, 449
DINSKIY, V. I., 69-2494
D'KO, G. I., 69-2453
IHAN, M.-T., 69-1048
AIRE, L., 69-2518, 3118, 3136, 31
LLE, J., 69-1353
LLE, M., 69-773, 1150
D. E., 69-1725, 1816, 3204, 05
J., H., 69-3302
DAI SUNG, 69-1126
SANG MAN, 69-1109
ANANDAM, C., 69-3233, 3236, 37, 3248, 3298, 3575, 3577
EVRE, C., 69-3229
ER, C., 69-474, 2234
EROS, J. P., 69-185
EROS, R. Z., 69-185
EYDO, V. A., 69-376
IERSKI, J., 69-243
MANN, E., 69-2444
TINEN, M., 69-3333
, A. YU., 69-410
EKOVA, M. V., 69-2998
EU, M., 69-238, 2975
ONG, F., 69-1285
ONG, M., 69-1933
MAITRE, R. W., 69-2403, 2447
MASURIER, W. E., 69-3478
CINAS, A. N., 69-728, 729
EUF, N., 69-2863
SCH, G., 69-665, 1762, 2402
SEN, G. J., 69-712
SKAYA, S. V., 69-2328
Z, H., 69-1301
N, C., 69-1568
NARD, A. J., 69-2824
NARD, B. F., 69-2470, 2676, 305
NARDI, P., 69-1797
NE, M., 69-2054
NG, K. W., 69-948
NIDOV, V. YA., 69-840, 1172
ERSONNE, J., 69-3353
RICHE, H. H., 69-3112
Z, H., 69-2330
URE, F. G., 69-2145, 3155
ERRIER, J., 69-2561, 3448
NER, R., 69-1866
NIKOV, F. A., 69-3293
OLLE, R., 69-1338
CHENKOV, O. A., 69-2741
ERIDGE, B. E., 69-3547
I-DONATI, G. R., 69-1400
INSON, A. A., 69-86, 2203
INSON, L. M., 69-1038
Y, C., 69-565, 611, 1747
VIS, C. L., 69-1278
VIS, D., 69-2074
VIS, J. B., 69-276
VIS, J. F., 69-765, 3292
VIS, R. W., *Jr.*, 69-1265
IER, J.-C., 69-647
CHI-TANG, 69-140, 1990
KHOVITCH, V. V., 69-1701
DICOAT, R. T., *Jr.*, 69-320, 329, 248
ER, V. V., 69-569, 1370
STRÖM, L., 69-836
BERMANN, R. C., 69-2628
E, C. B., 69-860, 1755
A DE FARIA, J., 69-170, 1409, 480
ARES, E., 69-885
DSAY, J. R., 69-2799
LIPMAN, P. W., 69-2498, 3357
LIPPMANN, F., 69-2077, 2513
LIPSCHUTZ, M. E., 69-479
LIS, J., 69-3614
LISITSIN, A. K., 69-451
LISITSYN, A. E., 69-2364
LISITSYNA, N. A., 69-1929, 2875
LISOYVAN, V. I., 69-2328
LISS, P. S., 69-3146
LISSILLOUR, J., 69-3329
LITVAN, G. G., 69-275
LITVIN, A. L., 69-875
LITVINOVSKIY, B. A., 69-688
LLAMBIA, E., 69-730
LLEWELLYN, P. G., 69-1143
LLOYD, R. M., 69-1327
LO, HUANN-JIH, 69-1208, 1232, 1490
LOBACH-ZHUCHENKO, S. B., 69-2731, 3463
LOBANOV, M. P., 69-1997
LOCARDI, E., 69-3461
LOCKWOOD, J. P., 69-725
LODDER, W., 69-258
LÖFFLER, H., 69-1065
LOFT, B. C., 69-2837, 2838
LOGVINENKO, N. V., 69-1014
LOHSE, H.-H., 69-164
LOMBARDI, G., 69-1577, 2880, 3388
LOMOZOVÁ, V., 69-2368
LONEY, R. A., 69-2406
LONG, G., 69-2873
LONG, J. V. P., 69-2801
LONG, L. E., 69-3458
LONG, W., 69-3055
LONKA, A., 69-1669
LÖNS, J., 69-157
LOOMIS, A. A., 69-1825
LOPATKINA, A. P., 69-403
LOPES-VIEIRA, A., 69-1049
LÓPEZ RUIZ, J., 69-664
LORD, H. C., 69-1373
LORD, J. H., 69-196
LOREC, S., 69-1859
LORENZONI, S., 69-1579, 1711, 2585
LOSCHI GHITTONI, A. G., 69-2435
LOSEV, A. L., 69-3502
LOSSAINT, P., 69-1333
ŁOUBAT, H., 69-2433
LOUGHNAN, F. C., 69-786
LOUISNATHAN, S. J., 69-501
LOVE, A. H., 69-1313, 3128
LOVE, J. D., 69-2539
LOVELAND, W., 69-2240
LOVERING, J. F., 69-551, 3138, 3428
LOVERING, T. G., 69-1136, 1302, 1388, 3090
LOVERING, T. S., 69-2149
LOVETT, D. B., 69-958
LOY, W., 69-2420
LU, H. C., 69-777, 778
LUBIN, J.-C., 69-3038
LUCAS, G., 69-767
LUCAS, J., 69-1936, 2826
LUCAS, J. W., 69-2706
LUDLAM, B. A., 69-2665
LUECKE, W., 69-1352
LUEDKE, R. G., 69-2945
LUFT, S. J., 69-2479
LUMBERS, S. B., 69-717
LUNDEGÄRDH, P. H., 69-2410
LUNDQVIST, T., 69-2411
LUNDSTRÖM, I., 69-3286
LUR'YE, L. M., 69-3092
LUSHNIKOV, V. G., 69-853, 1199
LUSHNIKOV, V. V., 69-434
LUTH, W. C., 69-313, 3340
LUYENDYK, B. P., 69-864
LAYAKHOV, YU. V., 69-203, 1298, 1299, 2405
LYAKHOVICH, V. V., 69-378
LYALIKOVA, N. N., 69-2141

MABEY, D. R., 69-2002
MABUCHI, H., 69-474, 69-2234
MCATEE, J. L., *Jr.*, 69-2306
MCBIRNEY, A. R., 69-756, 2406
MCCALL, G. J. H., 69-2243, 2245
MACCARRONE, E., 69-1690
MCCARTHY, H., 69-2002
MCCARTHY, J. H., 69-1388, 2149
MCCARTHY, J. H., *Jr.*, 69-1877, 2787
MACCIONI, L., 69-3377
MCCLAINE, L. A., 69-1650
MCCOLL, D. H., 69-489
MCCONNELL, D., 69-1198, 2371
MCCONNELL, R. K., *Jr.*, 69-932, 1650, 2819
MCCOY, F. W., *Jr.*, 69-1008
MCDANIEL, A. C., 69-1612
MACDONALD, G. A., 69-630, 2406
MCDONALD, J. A., 69-737, 3472
MACDONALD, R., 69-1671
MCDOUGALL, I., 69-5
MCDOWELL, F. W., 69-13, 14
MCFETRIDGE, D., 69-3037
MCGRATH, J. G., 69-2635
MACGREGOR, A. R., 69-1896
MACGREGOR, I. D., 69-1626
MCGUIRE, R. C., 69-86
MACHADO, F., 69-3401
MCHARDY, W. J., 69-2834
MACHIDA, H., 69-764, 1655
MCHIGH, J. B., 69-1872
MACHIN, M. P., 69-2365, 2366
MCIVER, J. R., 69-3571
MACKAY, A. L., 69-2067
MCKEE, E. H., 69-2406
MCKELLAR, I. C., 69-712
MCKENZIE, D. B., 69-2819
MACKENZIE, F. T., 69-3054, 3071
MACKENZIE, R. C., 69-1732
MACKEVETT, E. M., *Jr.*, 69-1699
MCKIE, D., 69-1072
MACKIE, P. E., 69-184
MACKOWSKY, M. T., 69-782
MCLANE, J. E., 69-2806
MACLE, M., 69-3367
MACLEAN, D. J., 69-839
MCLEOD, T. R., 69-902
MACLEOD, W. N., 69-482
MACRAE, N. D., 69-1437
MCRAE, S. G., 69-1925
MADSEN, B. M., 69-1508, 2537, 2542
MAGLIONE, G., 69-1770
MAHAJAN, G., 69-3622
MAHON, W. A. J., 69-443
MAIKLEM, W. R., 69-1007
MAISSONNEUVE, J., 69-905
MAITRA, A., 69-781
MAJOR, A., 69-2114
MAJOR, R. L., 69-2034
MAJUMDAR, B., 69-781
MAKAROV, E. S., 69-158
MAKAROV, V. N., 69-597, 1462
MAKI, I., 69-2101
MAKOVICKÝ, E., 69-1960
MAKSIMOVA, N. V., 69-1485
MAKSIMOVIĆ, Z., 69-1019, 2192
MALAKHOV, A. A., 69-2941
MALAKHOVA, N. P., 69-2525
MALAMUD, M., 69-2377
MĂLDĂRESCU, I., 69-1307
MALESZEWSKA, H., 69-72
MALEVSKIY, A. YU., 69-1185, 1186
MALEYEV, E. F., 69-3462
MALHOTRA, P. D., 69-1864
MALIK, F. R., 69-955
MALIK, W. U., 69-2840
MALININ, S. D., 69-425
MALINKO, S. V., 69-1438, 2347, 2364, 2388, 3344
MALL, A. P., 69-2778
MALLORY, E. C., *Jr.*, 69-3156
MALYSHEVA, T. V., 69-1040
MANDARINO, J. A., 69-599, 1605, 1773
MANETTI, P., 69-2745
MANGIN, J.-P., 69-1353
MANILICI, V., 69-3390
MANKIN, C. J., 69-1911
MANNING, P. G., 69-846, 1056, 1057, 1955, 1985, 2052, 2643
MANNWEILER, U., 69-1182
MANSON, V., 69-630
MANTEN, A. A., 69-3185
MANTIN, I., 69-2835
MANTON, W. I., 69-2155
MANUEL, O. K., 69-2248
MAO, H.-K., 69-2625, 3047
MAPPER, D., 69-2236
MARAKUSHEV, A. A., 69-2273
MARÇAIS, J., 69-1798, 2711
MARCHAK, V. P., 69-423
MARCHENKO, E. YA., 69-1411, 1418, 2256
MARDIX, S., 69-165, 166
MAREL, H. W. VAN DER, 69-993 2844
MARFUNIN, A. S., 69-842, 1037, 2647
MARIANO, A. N., 69-132
MARIE, J. R., 69-2020
MARIGNAC, C., 69-3553
MARIN, YU. B., 69-736
MARINELLI, G., 69-2436
MARINENKO, J., 69-2806
MARK, E., 69-527
MARKHAM, N. L., 69-1498
MARKOV, A. B., 69-2169
MARKOV, V. K., 69-1157
MARKOVA, É. A., 69-262
MARKOWITZ, W., 69-2702
MARMO, V., 69-744
MAROV, I. N., 69-1365
MARRANZINO, A. P., 69-74
MARRES, J., 69-2422
MARSCHNER, H., 69-2513
MARSH, S. P., 69-2610
MARSHALL, J. H., *Jr.*, 69-2687
MARSHALL, M., 69-1890
MARSHALL, N. J., 69-426
MARSHALL, R. R., 69-486
MARSHALL, W. W., 69-27
MARTIN, B. F., 69-1249
MARTIN, H., 69-3207
MARTÍN, J., 69-1567
MARTINI, J., 69-1693, 3372
MARTINI, M., 69-2230
MÁRTON, P., 69-2659
MARUMO, F., 69-2352
MARUSHCHENKO, A. A., 69-3092
MARVIN, R. F., 69-901, 1811, 1816
MÂRZA, I., 69-1005
MASLEN, V. W., 69-161
MASLENIKOV, V. A., 69-2741
MASON, B., 69-523, 2238, 2244
MASON, R., 69-1946
MASON, W. J., 69-36
MASSOLI-NOVELLI, R., 69-2428
MASSONI, C. J., 69-2792
MASSOT, C., 69-48
MAST, R. F., 69-1366
MASUDA, A., 69-1627

Masumoto, K.-i, 69-2651
Mathieu, A., 69-105
Mathieu, P., 69-1353
Mathur, H. B., 69-1039
Mathur, V. K., 69-2623
Matos Alves, C. A., 69-1591
Matson, N. A., *Jr.*, 69-1387
Matsuda, S., 69-2075, 2322
Matter, A., 69-2513
Matteucci, E., 69-2429
Matthews, D. W., 69-1706
Mattick, R. E., 69-266
Matukhina, V. G., 69-1321
Matveyev, A. A., 69-355
Matveyeva, I. I., 69-2741
Maung, U. K., 69-2025
Maurel, P., 69-290, 774, 2059, 2879
Maurette, M., 69-2619
Maury, R., 69-855, 1750, 2652
Maus, H., 69-2556
Maxwell, J. A., 69-1428, 1897
Maxwell, J. R., 69-2188, 3113 3124
May, F., 69-103
May, I., 69-1865, 1866, 1867, 2190
Mayhead, W. E., 69-27
Mays, R. E., 69-2281, 3204, 3205
Mazé, M., 69-931
Mazeas, J. P., 69-199
Mazo, D. M., 69-1962
Mazor, E., 69-1403
Mead, C. W., 69-3338
Meade, R. H., 69-1937
Meadows, A. J., 69-469
Meagher, E. P., 69-138
Medaris, L. G., *Jr.*, 69-3201
Medlin, W. L., 69-1746
Meeks, N., 69-1821
Meen, V. B., 69-986
Mehnert, H. H., 69-2816
Meigh, A. C., 69-838
Meinickenko, A. K., 69-1284
Meinschein, W. G., 69-2216
Meister, R., 69-1518
Meixner, H., 69-2573
Mekhtiyeva, V. L., 69-450
Melcher, G. C., 69-726
Meldau, R., 69-1732
Melgerei, F. M., 69-1450
Mélières, F., 69-3493
Mel'nichenko, A. K., 69-1289, 2169
Mel'nik, Yu. P., 69-1173, 1178
Mel'nikova, G. L., 69-21
Mel'nitskiy, V. V., 69-3084
Melson, W. G., 69-644, 864, 1558, 2595
Menard, H. W., 69-1785, 2819
Menchetti, S., 69-2931
Mendes, F., 69-2, 2730
Men'shikova, R. T., 69-1820
Mensik, J. D., 69-58, 951
Menzel, R. G., 69-889
Mercy, E. L. P., 69-1705
Mergenov, Sh. K., 69-612
Mergoil, J., 69-3528
Mérigoux, H., 69-278, 366, 2118
Méring, J., 69-2843, 2846, 2847
Merisalo, M., 69-162
Merkle, A. B., 69-159
Merkulova, K. I., 69-1271
Merriam, R., 69-2548
Merry, J.-L., 69-2519
Meshcheryakov, R. P., 69-1257
Meshcheryakov, V. F., 69-2078
Messchaert, G. W., 69-1250
Metcalfe, R., 69-2705
Metz, P., 69-1212, 2069, 2070
Meuschke, J. L., 69-2787
Meyer, H. J., 69-2918
Meyer, H. O. A., 69-504
Meyer, M. W., 69-342
Meyer von Freyhold, O., 69-1407
Meyrowitz, R., 69-2079, 2080, 2081, 2779
Mezzetti, R., 69-3056
Michaelis de Sáenz, I., 69-921
Michard, A., 69-3569
Michele, V. De, 69-1764, 2667
Middlemost, E., 69-637, 746, 1542
Middlemost, E. A. K., 69-624
Middleton, D. D., 69-3587
Midgley, H. G., 69-289, 2824
Miekk-Oja, H. M., 69-2044
Mierzejewski, M., 69-734
Miesch, A. T., 69-2220
Migniot, C., 69-3490, 3491
Mihálik, P., 69-1482
Mikhaylov, D. A., 69-794
Mikkola, A. K., 69-1094, 2935
Miklós, M., 69-1683
Miles, E. R., 69-330
Mill', V. B., 69-1209
Millard, H. T., *Jr.*, 69-2806
Miller, D., 69-2824
Miller, J. A., 69-904, 909, 2725
Miller, T. P., 69-197, 2977
Millot, G., 69-1002, 1936
Mills, A. A., 69-1402
Mills, J. P., 69-884
Milovskiy, A. V., 69-365
Milton, C., 69-1774, 3510
Milton, D. J., 69-1406
Minaeva, N. A., 69-582
Minakov, F. V., 69-682
Minčeva-Stefanova, J., 69-1517
Mincheva-Stefanova, I., 69-1541
Mineyev, D. A., 69-2378
Mineyev, V. A., 69-2508
Mineyeva, R. M., 69-2647
Minutti, L., 69-1984, 2360, 2667
Minzararu, L., 69-1005
Mirashiro, A., 69-630
Mirăută, O., 69-1088
Mirkina, S. L., 69-1823
Mironova, O. F., 69-946
Mishchenko, K. S., 69-2902
Mišík, M., 69-3513
Misra, R. C., 69-3535
Mitchell, B. D., 69-2851
Mitchell, G. H., 69-640
Mitchell, J. G., 69-24
Mitchell, R. H., 69-561, 3361
Mitchell, R. S., 69-1514
Mitchell, W. A., 69-107
Mitich, G. B., 69-3531
Mitra, R. P., 69-89
Mitryeva, N. M., 69-613
Mittempergher, M., 69-3461
Miuskov, V. F., 69-3304
Miyashiro, A., 69-3541
Mizandrontsev, I. B., 69-2206
Mizutani, H., 69-2631
Mizutani, Y., 69-419
Mkrtchyan, A. R., 69-1037
Moberly, R., *Jr.*, 69-1008
Modreski, P. J., 69-2678, 2684
Moenke, H., 69-1891
Mogarovskiy, V. V., 69-1284, 1289, 2169
Moglia, G., 69-105
Mohadjer, K., 69-1879
Mohr, P. A., 69-678, 1786
Moineau, H., 69-2061
Moiola, R. J., 69-766, 2406
Moiz, A. A., 69-781
Moizhes, I. B., 69-357
Mokeeva, V. I., 69-1044
Molchanova, T. V., 69-3455
Moleva, V. A., 69-3222
Molochnova, V. A., 69-430
Momot, J., 69-3523
Monchoux, P., 69-869, 3077
Monese, A., 69-3211, 3240
Monforte, F. R., 69-280
Monk, E. F., 69-1846
Monnet, C., 69-1353
Montel, G., 69-183, 851
Montenat, C., 69-3127
Montenegro de Andrade, M., 69-3408
Montgomery, A., 69-600
Montravel, C. de, 69-1228, 1229
Moorbath, S., 69-911
Moore, A., 69-180
Moore, A. C., 69-1434
Moore, D., 69-639
Moore, G. W., 69-1312, 2176
Moore, J. G., 69-1658, 1659, 1661, 2469, 2506, 3265
Moore, N., 69-868
Moore, P. B., 69-136, 191, 192, 554, 1424, 1988, 2335, 2374, 2391, 2393, 2397, 2398, 2907
Moore, R., 69-2165, 2166
Moore, S. L., 69-2946
Moore, W. J., 69-1120
Moorhouse, W. W., 69-903
Moraga, B., 69-198
Morandi, N., 69-2427, 2874
Morbidelli, L., 69-960, 1574, 1577
Moreau, J., 69-3022, 3023, 3024
Moreland, G. C., 69-1826
Morelli, G., 69-1909
Morelli, G. L., 69-1907, 1908
Morelock, J., 69-3597
Morey, G. W., 69-2507
Morgan, A. M., 69-890
Morgan, J. W., 69-3172
Morgan, W. R., 69-699, 1543
Moricheva, N. P., 69-1351
Morin, N., 69-1537
Moriyama, A., 69-1655
Morozova, I. M., 69-2741
Morre-Biot, N., 69-2723
Morris, H. T., 69-2976
Morrissey, F. R., 69-1243
Mortimer, C., 69-1267
Mortley, W. S., 69-2650
Morton, D. M., 69-3590
Mose, D. G., 69-2714
Moseley, F., 69-3413
Moskaleva, S. V., 69-2493
Moskalyuk, A. A., 69-349
Moss, A. A., 69-3341
Moston, R. P., 69-1831
Mottana, A., 69-1437
Mötzing, R., 69-3521
Mountjoy, W., 69-2156, 2788
Moxham, R. L., 69-422
Mozgova, N. N., 69-3330
Mrose, M. E., 69-2145, 2543, 3320, 3338
Mu, Ko-min, 69-695
Muan, A., 69-3014
Muchi, M., 69-2298
Mudge, M. R., 69-3165
Mueller, G., 69-2553
Muffler, L. J. P., 69-2267, 2465
Mukashev, F. A., 69-399
Mukherjee, B., 69-781
Mukherjee, S., 69-3418
Mukhopadhyaya, A., 69-3548
Müller, G., 69-1301, 1768, 2513
Müller, W. F., 69-1160
Müller-Jungbluth, W.-U., 6 2513
Mulligan, R., 69-2260
Münnich, K. O., 69-1805
Munoz, J. L., 69-1223
Muñoz, M., 69-761
Murata, H., 69-2627
Murata, K. J., 69-1660, 1 1663, 2252
Muratova, D. N., 69-613
Murchison, D. G., 69-940
Murdoch, J., 69-1898
Murillo, C., 69-2961
Murina, G. A., 69-2734
Murphy, J. F., 69-1814
Murthy, S. R. N., 69-2954
Murthy, T. V. V. G. R. K., 3623
Murthy, V. R., 69-1349
Murty, N. S., 69-1598
Murzeyev, P. M., 69-2197
Mushkin, I. V., 69-2944
Mushtaq, A., 69-101
Myers, A. T., 69-2802

Na Chiangmai, P., 69-2036
Naeser, C. R., 69-2190
Naeser, C. W., 69-2742
Nafe, J. E., 69-630
Naganna, C., 69-3274
Nagasawa, H., 69-387
Nagasawa, K., 69-2294
Nagashima, K., 69-2326
Nagata, T., 69-3610
Nagy, B., 69-1281
Naidu, A. S., 69-3119
Naidu, M. G. C., 69-1483, 15 3234, 3238
Nakagawa, H. M., 69-1121, 18 1878, 2789, 2790, 2791
Nakahara, Y., 69-1875
Nakao, K., 69-2325
Nakashiro, F. M., 69-1467
Naldrett, A. J., 69-210, 17 3017
Nambu, M., 69-2092, 2387
Nandy, K., 69-476
Naples, E., 69-1247
Naqvi, S. M., 69-2696
Narayanaswami, S., 69-3470
Nash, J. T., 69-603
Nassau, K., 69-512, 513
Naughton, J. J., 69-912
Naumenko, P. I., 69-1765
Naumov, G. B., 69-440, 946, 1
Naumov, V. A., 69-2733
Navarini, A., 69-202
Nayak, V. K., 69-2266
Naydenov, B. M., 69-345
Naydin, P. D., 69-894
Nedashkovskiĭ, P. G., 69-582
Nedoma, J., 69-3214
Néel, L., 69-1947
Negi, B. S., 69-2981
Neglia, S., 69-2873
Negretti, G. C., 69-1577
Nehru, C. E., 69-3432
Neiva, J. M. C., 69-1123
Nekrasov, I. Ya, 69-2095
Nelen, J. A., 69-555
Nelson, A. E., 69-1614, 26 3436, 3544
Nelson, J., 69-3181
Nelson, W. H., 69-2483
Němec, D., 69-790
Nemori, M., 69-2075
Nemtsovich, V. M., 69-3394
Nesbitt, J. D., 69-2701
Nesbitt, R. W., 69-4

MELOVA, Z. N., 69-447, 448
TEROFF, W. D., 69-3493
TOYANOVA, O. A., 69-3392
MANN, H., 69-618
STUPNÝ, E., 69-916
VONEN, K. I., 69-3278
ŽIL, J., 69-1015
ELL, M. F., 69-913
VESELY, H., 69-2370
TON, R. C., 69-2107
HOLLS, G. D., 69-3104
HOLLS, J., 69-3430
HOLLS, P., 69-2648
HOLS, L., 69-1356
KEL, E. H., 69-527, 846, 1540, 957
KERSON, H. W., 69-1029
OLAS, A., 69-510, 801, 810, 832
OLAS, J., 69-773, 1150
OLETTI, M., 69-614
DERMAYR, G., 69-819
LSEN, H., 69-1326
UWENKAMP, W., 69-1795
GLI, E., 69-533
NI, H., 69-1094
ITICHEV, P. I., 69-281, 2058
ITINA, L. P., 69-423
OLAYEV, D. S., 69-2201, 2202
OLAYEVA, D. KH., 69-3260
OL'SKAYA, I. V., 69-1165
ULIN, N. N., 69-1112
ES, M. S., 69-1302
SSEN, B., 69-618
SEN, H.-U., 69-152, 1052, 3290
SENBAUM, P. N., 69-515
SCH, K.-H., 69-1211
SCHE, R., 69-1176
ON, P. H., 69-2390
SLE, D. C., 69-2164, 2816, 3356
ŠL, D., 69-1827, 2517, 3496
-NYGAARD, A., 69-636
TZLIN, J., 69-17
ZET, G., 69-1154, 2043
ÁN, J., 69-2276
DART, A. J., 69-1995
RDEMANN, D., 69-2232, 2233
RMAN, M. B., 69-1834
RMARK, W. R., 69-2549
RISH, K., 69-2795
RTHWOOD, D. O., 69-2074
RTON, J. J., 69-1928
RTON, R. H., 69-2706
RWOOD, V. G. C., 69-336
SKOV, V. I., 69-76
ÁK, F., 69-539, 566
VIKOV, YU. A., 69-454
VOROSSOVA, L. E., 69-1528
VOTNÝ, J., 69-566
VOZHILOV, A. I., 69-147
WACKI, W., 69-167, 1062, 2352, 354, 2910, 2911, 3617
WLAN, G. A., 69-1861
BER, B., 69-2348
OVO, G., 69-1679, 3498
RMATOV, D., 69-964

ERLIES, F., 69-1259
ERLIN, A., 69-3050
RADOVICH, J. D., 69-2406
RIEN, J. L., 69-932
'ONNOR, D. J., 69-522
'ONNOR, J. T., 69-2399, 2708, 813
A, U., 69-2002, 2184
KADZE, G. L., 69-383
OM, I. E., 69-999
RTEL, A. C., 69-3073, 3074
FLER, R., 69-2600
TEDAL, I., 69-3221
AWA, T., 69-2128, 2298

OGNIBEN, G., 69-1129, 1436, 2431, 3211
OGUBA, T., 69-1169
O'HARA, M. J., 69-1216, 1705, 2045
O'HARA, MARTIN J., 69-3037
OHMASA, M., 69-128, 1062
OHTA, Y., 69-1548, 3282
OJI, Y., 69-2298
ÔKI, Y., 69-2282
OKRUSCH, M., 69-3099, 3526
OKUMURA, K., 69-2327
OLDENBURG, J. A., 69-882, 2552
OLDROYD, R. W., 69-1761
OLEKSYNOWA, K., 69-1686
OLIVARES, R. S., 69-1512
OLIVE, W. W., 69-2867
OLIVER, H. W., 69-266
OLIVER, J., 69-2699
OLIVER, R. L., 69-691
OLSEN, E., 69-3351
OLSON, D. H., 69-160
OMENETTO, P., 69-2978, 3324
OMORI, K., 69-1969, 2639, 3294
ONKEN, H., 69-1028
ONOFRI, R., 69-1573
ONOPRIYENKO, V. L., 69-1173
ONUKI, H., 69-2563
ONUMA, N., 69-3184
OOSTERWYCK-GASTUCHE, *Mme.* VAN, 69-1444, 3261
OPDYKE, N. D., 69-2819
OPPENHEIM, M. J., 69-312
ORANGE, A. S., 69-1748
ORCEL, J., 69-2233, 3186
O'REILLY, S. Y., 69-2265
ORLANDI, C., 69-1383
ORLIAC, M., 69-3347
ORLOV, G. G., 69-2026
ORLOV, I. M., 69-687
ORLOV, YU. L., 69-3304
ORVILLE, P. M., 69-2151
OSBORN, E. F., 69-2499
OSIPOV, V. V., 69-2058
OTROSHCHENKO, V. D., 69-367
OTT, W. F., 69-2513
OTTEMANN, J., 69-1498, 1527, 1529, 2185, 2348, 2385, 3349
OTTEWELL, R. H., 69-2824
OTTO, H. H., 69-1195
OTTO, J., 69-2767, 2887
OTTO, J. B., 69-2739
OURISSON, G., 69-2189
OVCHINNIKOV, I. M., 69-349
OVCHINNIKOV, L. N., 69-2026
OVERSTREET, W. C., 69-200, 2367
OVSYANNIKOV, V. M., 69-346
OXBURGH, E. R., 69-757
OYAWOYE, M. O., 69-3406
OZAWA, T., 69-1854, 2051
OZIMA, M., 69-3610

PAAKKARI, T., 69-162
PÁCAL, Z., 69-2368
PAČES, T., 69-3153
PACHADZHANOV, D. N., 69-857
PADÊRA, K., 69-601, 1517
PÁEZ CARRIÓN, A., 69-662
PAGANELLI, L., 69-3382, 3383, 3384
PAGE, N. J., 69-1447, 2349, 2798
PAKHOMOV, S. I., 69-438
PALACAS, J. G., 69-1312, 1313, 3128
PALAS, M., 69-250, 251, 253
PALIVCOVÁ, M., 69-3454
PALTRIDGE, I. M., 69-256
PANDE, I. C., 69-3537, 3573, 3622
PANDE, P., 69-781
PANDE, P. C., 69-781, 1899
PANDEY, M. K., 69-795
PANKHURST, R. J., 69-2497
PANKINA, R. G., 69-457
PANOV, YU. K., 69-353
PANT, I. D., 69-781
PANTÓ, G., 69-1291, 1583
PAPASTAMATIOU, J., 69-2192
PAPEZIK, V. S., 69-1133
PAPIKE, J. J., 69-139, 142, 2281, 3251, 3254
PAPIU, V. C., 69-1088
PAPON, A., 69-2710
PAPUNEN, H., 69-1668, 1669
PAQUET, H., 69-1002, 1936
PARCHEVSKIY, V. P., 69-2199
PAREKH, P. P., 69-45, 3086
PARFENOFF, A., 69-1513, 3347
PARFITT, G. D., 69-2824
PARHAM, W. F., 69-999
PARK, R. G., 69-2577
PARK, W.-C., 69-2513
PARKER, A., 69-961
PARKER, F. J., 69-2679
PARKER, R. L., 69-1300, 2380, 2468, 2675
PARKER, T. W., 69-2824
PARKHOMOVSKIĬ, V. L., 69-287
PARKS, G. A., 69-858
PARRISH, D. G., 69-3492
PARRISH, W., 69-1032
PARRY, W. T., 69-106
PARSLOW, G. R., 69-1618, 1845
PARSONS, I., 69-311, 1646, 2120
PARTHASARATHY, S., 69-2888
PARTHASARATHY, T. N., 69-3441
PARTHÉ, E., 69-1060
PARTRIDGE, B. A., 69-276
PARWEL, A., 69-2329
PASHALY, N. V., 69-2869, 3501
PASSAGLIA, E., 69-1426, 3345
PASSAQUI, B., 69-3077
PATEL, A. R., 69-2615
PATEL, C. C., 69-939
PATILLET, J., 69-3127
PATRAT, G., 69-3012
PATTERSON, J. H., 69-522
PATTON, W. W., *Jr.*, 69-2320
PATWARDHAN, A. M., 69-3416, 3443, 3536
PATZAK, I., 69-280
PAULICK, J., 69-2370
PAUS, P. E., 69-2782
PAVELESCU, L., 69-1421, 1439, 1471
PAVLENKO, A. S., 69-1292
PAVLENKO, V. S., 69-390
PAVLOV, A. L., 69-285
PAVLOV, L. P., 69-1346
PAVLOV, V. F., 69-994
PAVLOVA, V. N., 69-1485
PAVLYUCHENKO, V. S., 69-3030
PAVONI, N., 69-3609
PAWLOWSKI, S., 69-2992
PEACOR, D. R., 69-140, 141, 173, 1053, 2892
PEAKE, E., 69-400
PEASE, M. H., *Jr.*, 69-723
PECK, D. L., 69-2506
PEDRO, G., 69-317, 1328, 2878, 3038, 3041
PÉLISSAC, B. DE L. DE, 69-300
PELLIZZER, R., 69-1641, 2430
PELTOLA, E., 69-1345, 3227
PENCO, A. M., 69-1043
PENDIAS, H., 69-467
PENDLEBURY, G. B., 69-1422
PEN'KOV, I. N., 69-168, 1959
PENTA, A., 69-1293, 3115
PERCHUK, L. L., 69-1292, 3082
PERETTI, L., 69-2974
PÉREZ MATEOS, J., 69-578
PEREZ-RODRIQUES, J. L., 69-2850
PERIDOTITE INTRUSION RESEARCH GROUP, 69-2464
PERING, K., 69-3093
PERMINGEAT, F., 69-621, 1461, 2382, 3077, 3347
PERMYAKOV, S. A., 69-2733
PERRAULT, G., 69-1605, 2379
PERROTTA, A. J., 69-174
PERRY, K., *Jr.*, 69-549, 1443
PERSEIL, E.-A., 69-2336, 2985
PERSSON, C., 69-1807, 1808
PERTLIK, F., 69-2917
PERTSEL', A. M., 69-353
PESELNICK, L., 69-1518
PESTY, L., 69-1009, 1207, 1683
PETERMAN, Z. E., 69-1376, 1377, 1378
PETERS, F. A., 69-1155
PETERS, T., 69-1013, 1408, 1581
PETERSIL'YE, I. A., 69-496
PETERSON, D. W., 69-266
PETERSON, E., 69-3135
PETERSON, H., 69-1242
PETERSON, M. J., 69-978
PETRASCHEK, E., 69-2933
PETRASCHECK, W. E., 69-466, 1138, 1392
PETRICHENKO, O. I., 69-412
PETROV, L. L., 69-360
PETROVSKIY, A. D., 69-3133
PETROVSKIY, S. N., 69-1998
PETRUK, W., 69-1753
PETRULIAN, N., 69-1261
PETTINICCHIO, L., 69-1343
PETZOLD, D., 69-2338
PEVTSOVA, L. A., 69-375
PEYRONNET, P. DE, 69-3528
PEZERAT, H., 69-2835, 2843
PHAN, KIEN DUONG, 69-368
PHEMISTER, J., 69-103, 2415
PHENE, S. G., 69-3250, 3274
PHILLIPS, A. J., 69-426
PHILLIPS, B. J., 69-766
PHILLIPS, E. R., 69-544, 1645
PHILLIPS, R. L., 69-2772
PHILPOTTS, A. R., 69-904
PHILPOTTS, J. A., 69-79
PHINNEY, R. A., 69-2819
PHINNEY, W. C., 69-2613
PICADA, R. S., 69-2271, 2614
PICCARDO, G., 69-1413
PICCIOTTO, E., 69-892
PICHLER, H., 69-3437
PICKERING, R. J., 69-3130
PICOT, P., 69-562, 611, 1489, 1493, 1772, 2382, 3326
PIDGEON, R. T., 69-15
PIERCE, A. P., 69-1274, 2143
PIERCE, J. W., 69-884, 3512
PIERMARINI, G. J., 69-127
PIERROT, R., 69-611, 622, 1489, 2382, 3326
PIGORINI, B., 69-2257, 2557, 3339
PIKE, D. R., 69-2939
PILIPCHUK, M. F., 69-429, 1315, 1316
PILLAI, K. C., 69-1354
PILOT, J., 69-25
PINCKNEY, D. M., 69-973
PINET-VIGOT, M., 69-799
PINSON, W. H., 69-2715
PINTA, S., 69-1353
PISARSKAYA, V. A., 69-3260
PISKUNOV, B. N., 69-2492
PITMAN, W. C., *III*, 69-2700
PITTY, A. F., 69-436
PITULEA, G., 69-1717

Piznyur, A. V., 69-2405
Platonov, A. N., 69-842
Platou, S. W., 69-2624
Plimer, I. R., 69-225
Pobeguin, T., 69-587, 588, 2516, 3495
Poddar, B. C., 69-570
Poetz, J. A., 69-1303
Pogorelov, B. S., 69-3399
Poirot, J.-P., 69-3064
Polák, R., 69-1035
Poldervaart, A., 69-630, 3570
Polevaya, N. I., 69-1819
Polikarpov, G. G., 69-2199
Polin, Yu. K., 69-3444
Pollack, S. S., 69-1398
Pollard, C. O., *Jr.*, 69-849
Pollmann, S., 69-2185
Pollock, G. E., 69-3135
Polushkina, A. P., 69-564
Polzer, W. L., 69-1225, 1358
Pomerol, C., 69-3403
Ponnamperuma, C., 69-3093
Ponomareva, L. G., 69-420, 1721
Poole, E. G., 69-1673
Popolitov, E. I., 69-360
Popov, A. A., 69-1222
Popov, Yu. N., 69-1820
Popova, S. V., 69-1183
Porath, H., 69-1752
Porrenga, D. H., 69-2864
Portilla Quevedo, V. I., 69-1083
Portil'ya Kevedo, V. I. = Portilla Quevedo, V. I.
Portnov, A. M., 69-876
Pöschl, A., 69-2003
Pošmourný, K., 69-243
Posner, A. S., 69-2086, 2087
Potenza, R., 69-1343
Pouba, Z., 69-252
Pouget, R., 69-3329
Pouit, G., 69-1098, 2004
Poul, X., 69-2450
Poulain, P.-A., 69-1489
Pouliot, G., 69-1482, 1523
Povilaytis, M. M., 69-2737
Povondra, P., 69-553, 2389
Powar, K. B., 69-3419
Powell, B. N., 69-3188
Power, G. K., 69-3095
Power, G. M., 69-1283, 2270
Powers, H. A., 69-2159
Prabhakaram, P., 69-318
Prakash, D., 69-2535
Prasad, E. A. V., 69-3238
Prasad, N. N., 69-3504
Prashnowsky, A. A., 69-1259
Predali, J.-J., 69-2072
Prentice, F. J., 69-143
Presley, B. J., 69-1320
Preston, J., 69-642, 643
Preuss, E., 69-1407
Prévot, M., 69-573
Price, P. B., 69-2720
Price, W. J., 69-1876
Pringle, I. R., 69-909
Prinz, M., 69-630, 3432
Prinz, W. C., 69-2358
Prokin, V. A., 69-1999
Prokopchuk, B. I., 69-2527
Proskurko, A. I., 69-2457
Proskuryakova, E. B., 69-496
Prost, A., 69-1757
Prost, R., 69-2845
Protas, J., 69-621, 622, 2890, 2930
Prouhet, J. P., 69-2010
Provan, D. M. J., 69-461
Prozorovich, G. E., 69-2559, 2694
Pruden, G., 69-1857, 2827
Pryalukhina, A. F., 69-2455
Ptitsyn, A. B., 69-3015
Puga, E., 69-789, 812
Puhan, D., 69-1212
Pulou, R., 69-2979
Purna, L., 69-3470
Purton, M. J., 69-2871
Purtscheller, F., 69-814, 3527
Puyo, M., 69-47
Pyatenko, Yu. A., 69-1982, 2904

Quadrado, R., 69-268, 1409, 1480
Quagliarella, F., 69-1516
Quaratesi D'Achiardi, L., 69-2523
Quareni, S., 69-1980, 2770
Quesada, A., 69-52
Quirk, J. P., 69-93
Qurashi, M. M., 69-1085
Qureshi, A. A., 69-215
Qureshi, I. R., 69-1791
Qureshi, M. H., 69-280
Qureshi, M. Y., 69-232
Qureshy, M. N., 69-2696

Raabe, R. G., 69-2945
Raade, G., 69-1758
Raal, F. A., 69-3058
Raam, A., 69-2265
Raase, P., 69-3049
Raaz, F., 69-155, 2894
Rabenau, A., 69-1179
Racinowski, R., 69-775
Radcliffe, D., 69-1432, 1501
Rader, L. F., *Jr.*, 69-951, 1280, 1334, 2158, 2162, 2177
Radhakrishna, B. P., 69-3247, 3417
Radkevich, R. O., 69-1730
Radmacher, H. W., 69-75
Radonova, T. G., 69-506
Radtke, A. S., 69-28, 1511, 1699, 2019, 2976
Radulescu, D., 69-1088
Rafikov, T. K., 69-612
Rafter, T. A., 69-418, 419
Ragan, D. M., 69-1651, 2488
Raguin, E., 69-245
Rahman, R., 69-232
Raholison, *Mme.*, 69-1519
Raith, M., 68-1582, 3285
Raja, R., 69-3414
Rajan, R. S., 69-3174
Rajani, H. J., 69-2848, 2849
Rajasekaran, K. C., 69-1429
Rajner, V., 69-1363
Raju, A. T. R., 69-776
Rakcheev, A. D., 69-3330
Raleigh, C. B., 69-1555, 1738, 1739, 3173
Rálek, M., 69-1237
Ramakrishna, M., 69-3578
Ramamurthy, R. K., 69-30
Raman, S., 69-123
Rambabu, Ch., 69-3097
Ramdohr, P., 69-1524, 1531
Ramovic, M., 69-1087
Ramskov, T., 69-2690
Ranchin, G., 69-2171, 2421, 3097
Rancitelli, L. A., 69-3194
Rand, J. R., 69-2819
Rank, D., 69-388
Ransom, D. M., 69-544, 742
Rao, A. B., 69-1487
Rao, B. R., 69-188
Rao, G. V. S., 69-1483
Rao, G. V. U., 69-3626
Rao, J. S. R. K., 69-823, 3309, 3331, 3421, 3578
Rao, K. K., 69-3085
Rao, K. L. N., 69-1598
Rao, N. K., 69-3626
Rao, R. N., 69-781
Rao Jagannatha, J., 69-3234
Raoul, F., 69-559
Rapp, M., 69-2195
Rashid, M. A., 69-1318
Rasmussen, J., 69-636
Rastsvetaeva, R. K., 69-1986
Ratehin, E. A., 69-1266
Ratté, J. C., 69-2475
Rau, H., 69-1179
Rau, R. V. R., 69-3581
Raumer, J. F., von, 69-3562
Raup, O. B., 69-615
Raup, R. B., 69-2980
Ravich, M. G., 69-2592
Ray, S. K., 69-3574
Rayevskiy, V. I., 69-413
Raymond, M., 69-133
Raymond, W. H., 69-1391
Razafiniparany, A., 69-1597, 2596
Razdorozhnyy, V. F., 69-404
Razmakhnin, Yu. N., 69-3566
Razmanova, Z. P., 69-3222
Razvi, S. K., 69-781
Reasenberg, J. R., 69-2686
Redden, J. A., 69-719
Reed, B. L., 69-236, 463, 1448, 1812
Reed, J. C., *Jr.*, 69-2477, 3435
Reeder, S. W., 69-2203
Reeher, J. R., 69-2046
Rees, L. V. C., 69-2124
Reese, H. H., 69-2125
Reeser, D. W., 69-2541
Reesman, A. L., 69-319
Reeve, R., 69-3034
Reeves, C. C., *Jr.*, 69-106
Reeves, R. D., 69-354, 468
Reichen, L. E., 69-2780
Reichenbach, H. G. von, 69-91
Reid, A. F., 69-150, 171
Reid, A. M., 69-3177
Reinhardt, B. M., 69-3412
Reitan, P. H., 69-797
Reithler, J.-C., 69-575, 3007, 3008
Remizov, I. N., 69-1014
Remo, J. L., 69-494
Rémond, G., 69-573, 2340
Repechka, M. A., 69-2460
Rettig, S. L., 69-1868
Rex, D. C., 69-7
Rex, R. W., 69-49
Reynaud. C., 69-3027
Reynolds, R. C., *Jr.*, 69-2836
Reyre, Y., 69-3404
Rhodes, J. R., 69-962
Rhodes, W. W., 69-280
Ribar, B., 69-2911
Ribbe, P. H., 69-1401, 2373, 2889, 2898, 3183, 3203
Ribeiro Coelho, M. E., 69-53
Ribeiro Filho, E., 69-576
Riboud, P. V., 69-295
Ricci, C. A., 69-1641
Ricciardi, G., 69-2630
Rice, C. M., 69-2295
Rice, R. W., 69-3037
Rich, C. I., 69-1912
Richard, P., 69-2814
Richards, J. R., 69-2707
Richardson, S. W., 69-1708, 2108
Richmond, W. E., 69-3320
Richter, D. H., 69-1387, 1660, 1661, 1663
Richter, P., 69-1880, 2219, 2670, 3099
Rickard, M. J., 69-1431
Rickwood, P. C., 69-1255
Riddihough, R. P., 69-865
Rieche, R., 69-480
Riederer, J., 69-2310
Rieman, H. M., 69-1729
Rieuwerts, J. H., 69-2818
Riley, D. L., 69-2925
Rimer, D., 69-937
Rimšaite, J. H. Y., 69-532
Rimskaýa-Korsakova, O. 69-572
Rinaldi, C. A., 69-1118
Rinehart, C. D., 69-2041
Ringwood, A. E., 69-150, 1218, 1414, 2114
Rio, M., 69-518
Ritchie, J. A., 69-926
Rittmann, A., 69-3459
Riva di Sanseverino, L., 69-2764, 2765, 2766, 2932, 3337
Rivalenti, G., 69-667, 1576
Rivière, A., 69-3488
Rivière, M., 69-2751
Roa, P., 69-3489
Roach, C. H., 69-2635
Roach, R. A., 69-1722
Robbins, D. W., 69-1033
Roberson, C. E., 69-1190, 1358
Roberts, R. J., 69-1120
Robertson, J. M., 69-1171
Robertson, W. A., 69-2819
Robie, R.A., 69-843, 2050
Robinson, B. W., 69-291
Robinson, G. D., 69-2406
Robinson, P., 69-3253
Robinson, P. D., 69-934, 2927
Robinson, P. T., 69-2406
Robinson, S. C., 69-1428
Robinson, W. B., 69-700
Robson, G. R., 69-755
Rocci, G., 69-2417, 3374
Roche, H. de la, 69-625, 1286, 2400
Roche, J., 69-2729
Rodda, P., 69-7, 713
Rodgers, C., 69-1900
Rodgers, K. A., 69-3199
Rodin, S. S., 69-1040
Rodwell, J. R., 69-3275
Roedder, E., 69-974, 1736
Roever, W. P., de, 69-258
Rogacheva, É. D., 69-2616
Roger, G., 69-205, 2959
Rogers, J. J. W., 69-1625
Rogova, V. P., 69-3400
Roit, R. da, 69-1383
Roland, G. W., 69-292, 3020
Rolff, A., 69-331, 332
Roman, T., 69-2884
Romey, W. D., 69-624, 748, 2312, 3591
Roos, J. T. H., 69-1876
Rooymans, C. J. M., 69-280
Ropert, M.-É., 69-3228
Roques, M., 69-2710
Rose, E. R., 69-1131
Rose, H. J., *Jr.*, 69-615, 1882, 2799, 3205, 3231
Rose, W. C. C., 69-2415
Rosenbaum, F., 69-1862, 1865
Rosenberg, P. E., 69-298
Røsholt, B., 69-244
Rosholt, J. N., *Jr.*, 69-1377, 21
Rösler, H. J., 69-25
Ross, C. P., 69-2474, 2483
Ross, D. C., 69-3434
Ross, D. R., 69-2079, 2080
Ross, G. J., 69-179

ıs, M., 69-145, 146, 2079, 2860, 253
ısi, A., 69-806
ısi, F., 69-229
ısington, D. R., 69-3033
t, F., 69-669
hbauer, R., 69-1964
the, P., 69-2425, 2513
thewell, E., 69-3037
ıse, R. C., 69-173
ısset, C., 69-3517
tschka, G., 69-280
ıx, L., 69-3551
ıxhet, P., 69-2885
we, J. J., 69-965, 1866, 2507
we, M. W., 69-1399
wland, J. F., 69-1540
wles, S. L., 69-1191
y, A. K., 69-3621
y, A. M., 69-952
y, R., 69-1064, 2064
y, S., 69-231
y, S. S., 69-579, 3582
zhanskiy, V. N., 69-569, 1370
binson, M., 69-416
ckridge, J., 69-1497, 1883
dashevskiĭ, E. G., 69-2078
del, A., 69-9
denko, S. A., 69-606
dman, R., 69-38
dnitskaya, E. S., 69-2302
iz, L., 69-2961
meau, J. L., 69-393
myantsev, G. S., 69-2364, 3344
nk, R. B., 69-3037
pert, J. P., 69-552
sinov, V. L., 69-2566
ssell, J. D., 69-2825, 2834
ssell, K. L., 69-2697
ssell, M. J., 69-233
ssell, R. G. G., 69-2087
tstein, M. S., 69-3230
abinin, Yu. N., 69-1157
all, A., 69-1667
all, W. R., 69-3242
ka, W., 69-1006
tuba, J. J., 69-1611
zhenko, B. N., 69-440

ager, R., 69-1130, 1482
alfeld, H., 69-176, 2125
ari, E., 69-581
batier, G., 69-2856
batini, G., 69-1641
batino, B. Di, 69-1127
belli, C., 69-177, 181, 1967, 2921, 3336
bina, A. P., 69-2672
bine, P. A. 69-577, 1016, 1310, 1672, 3365
bo, E., 69-1405
bu, D. D., 69-484
cher, J. K. 69-1864
ckett, W. M., 69-3159
danaga, R., 69-2051
dig, A. A., 69-1791
fin, I. A., 69-168, 1959
fronov, I. L., 69-1585
glo, V. V., 69-3392
gon, J.-P., 69-656, 2419, 3296
gredo, J., 69-1569
ha, A. K., 69-2725, 3308, 3442, 3466
hama, T. G., 69-581, 3333
hi, M. A., 69-215
hl, K., 69-1075
hores, J., 69-66, 2771
insbury, C. L., 69-218, 1262, 1863, 2949
jgó, C., 69-1506

Sakhatskiy, I. I., 69-1585
Saks, V. N., 69-894
Saksela, M., 69-1996
Salah-ud-Din, K., 69-269
Saliot, P., 69-800
Salvadori, I., 69-2017
Samama, J.-C., 69-2022
Samoilovich, M. I., 69-147, 853, 2998
Samsonenko, N. B., 69-2328
Samsonova, N. S., 69-550, 1619
Sanada, S., 69-2282
Sanches Furtado, A. F. A., 69-1010
Sánchez Camazano, M., 69-2828
Sánchez Soria, P., 69-662
Sanders, J. V., 69-154
Sándor, E., 69-121
Sanero, E., 69-508
Sankar das, M., 69-3086
San Miguel, A., 69-1251, 1632
Sansom, K. G., 69-90, 2824
Santarelli, N., 69-645
Santoro, A., 69-127
Santos, A. R. dos, 69-3225
Santos, E. S., 69-2620
Sappal, K. K., 69-781
Šarc-Lahodny, O., 69-1149
Sargent, K. A., 69-2407, 2816
Sarin, S. D., 69-2533
Sarkar, S. C., 69-3328
Sarkar, S. N., 69-2725
Sarsadskikh, N. N., 69-1817
Saslaw, W. C., 69-2709
Sassi, F. P., 69-2264, 2440
Sastry, A. V. R., 69-3331, 3421
Sastry, G. S. R., 69-3101
Sathe, R. V., 69-503, 3255, 3259
Sato, M., 69-2075, 2322
Sato, Y., 69-2547
Saupé, F., 69-1317
Saurin, E., 69-364
Sauvage, J., 69-3493
Savant, V. V., 69-939
Savelli, C., 69-1647, 1884, 3150
Savkevich, S. S., 69-1733
Sawada, M., 69-65
Saxena, G. N., 69-3623
Saxena, M. A., 69-3443
Saxena, M. N., 69-3416
Saxena, S. K., 69-1348, 2154, 2261, 2574, 3002, 3081
Saxl, J., 69-117
Sayão Lobato, F. P. N., 69-1114
Scadden, E. M., 69-3149
Scaini, G., 69-2667
Schachner-Korn, D., 69-2341
Schäfer, K., 69-2513
Schäfer, U.-L., 69-2096, 2097
Scharbert, H. G., 69-634, 740
Scharm, B., 69-249, 251, 253
Schellmann, W., 69-530, 1934
Schenk, P. A., 69-409
Schettler, H., 69-2513
Schichl, H., 69-2894
Schidlowski, M., 69-2255, 3438
Schiffman, C. A., 69-322, 3060
Schiltz, J. C., 69-70
Schlanger, S. O., 69-1551
Schlattí, M., 69-1071
Schliephake, R. W., 69-1885
Schmid, R., 69-13, 807, 1762
Schmidt, E. D. D., 69-847, 3603
Schmidt, R. G., 69-2009
Schmidt-Eisenlohr, W. F., 69-214
Schmitt, R. A., 69-2240
Schneider, S. J., 69-1163
Schneider, W., 69-1971
Schneppe, M. M., 69-945, 949, 2190, 2785, 2786
Schnettler, F. J., 69-280
Schnetzler, C. C., 69-79
Schock, R. N., 69-2073
Schoeller, H., 69-3151
Schoen, L., 69-1832
Schoen, R., 69-1359, 1361, 1832
Schoenfeld, I., 69-54
Schofield, J. C., 69-401, 749
Schot, E. H., 69-2513
Schöttle, M., 69-2513
Schrader, R., 69-2338
Schreiber, E., 69-2628
Schreiber, T., 69-670
Schreyer, W., 69-1804, 2300
Schröcke, H., 69-1110
Schroeder, E., 69-735
Schroeder, R. J., 69-1923
Schroll, E., 69-39, 129, 1363
Schröpfer, L., 69-2117
Schryver, K., 69-1828
Schubert, W., 69-3564
Schubnel, H-J., 69-1488, 1493
Schuele, D. E., 69-2629
Schüller, K. H., 69-990, 2299
Schultz, L. G., 69-1926
Schultz, P. K., 69-691
Schulz, H., 69-157
Schulz, O., 69-2356
Schulze, E.-G., 69-672, 2973
Schürmann, K., 69-1213, 2112, 2113
Schutte, I., 69-2448
Schüz, W., 69-3029
Schwab, R. G., 69-976, 2106, 2116
Schwander, H., 69-3291
Schwarzenbach, D., 69-2912
Scientific American, 69-2820
Scott, B., 69-2852
Scott, R. F., 69-2706
Scotti, F., 69-2013
Seager, A. F., 69-2666
Seddon, N., 69-476
Seeliger, E., 69-922
Segerstrom, K., 69-1391
Segnit, E. R., 69-305, 3297
Segonzac, G. D. de, 69-113, 1003, 1004
Seiders, V. M., 69-2544
Seidov, A. G., 69-2869
Seifert, F., 69-2300
Seilacher, A., 69-2513
Seki, Y., 69-2324, 2327
Sellwood, B. W., 69-1677
Semaille, P. N., 69-2824
Semenov, E. I., 69-1528, 3352
Sen, S., 69-781, 3469
Sen, S. K., 69-3249
Senftle, F. E., 69-3198
Sen Gupta, D. K., 69-3586
Sen Gupta, N. R., 69-570
Sergeant, G. A., 69-1310
Sergeyev-Bobr, A. A., 69-147
Sergiyevskiy, V. M., 69-3392
Serratosa, J. M., 69-94, 1920
Serre-Ratsimandisa, R., 69-2636
Sevast'yanov, V. P., 69-3134
Sewell, J. R., 69-397, 2807
Sewell, P. A., 69-890
Shabynin, L. I., 69-206
Shackleton, N., 69-459
Shackleton, W. G., 69-792
Shacklette, H. T., 69-2222
Shafranovskiĭ, I. I., 69-1728
Shami, M. D., 69-269
Shams, F. A., 69-547
Shankland, T. J., 69-1034
Shapiro, L., 69-941, 945, 1862, 1869, 2752, 2792
Sharma, R. P., 69-3535
Sharma, S. K., 69-3091
Sharma, T., 69-3088, 3091, 3244
Sharma, T. R., 69-693, 3452
Sharp, J. V. A., 69-2816
Sharp, W. E., 69-3018
Sharp, W. N., 69-1889
Shashkin, D. P., 69-2388
Shawe, D. R., 69-1119, 1140, 2008, 2156, 2157
Shcheglov, A. D., 69-2942
Shcherbakov, I. B., 69-1460
Shcherbakov, Yu. G., 69-2139
Shcherbakova, M. Ya., 69-2922
Shcherbina, V. V., 69-373
Shchukin, E. D., 69-3611
Sheikh, N., 69-232
Sheldon, R. P., 69-2692
Shelley, D., 69-2578
Shemyakin, V. M., 69-2732
Shen, C. S., 69-473
Shengelia, D. M., 69-3396
Shepard, A. O., 69-2323, 2832
Sheppard, R. A., 69-788, 1608, 2319, 2554
Shergina, Yu. P., 69-1159
Sheridan, D. J., 69-1761
Sheridan, D. M., 69-2610
Sheridan, M. F., 69-1611
Sheridan, M. J., 69-2945
Shieh, Y. N., 69-3137
Shilin, A. V., 69-3502
Shimarev, M. N., 69-437
Shimazaki, H., 69-2277
Shimazu, Y., 69-1740
Shimizu, T., 69-2160
Shimoda, S., 69-149, 1906, 2253
Shimp, N. F., 69-1366
Shinkarev, N. F., 69-820
Shipilov, L. D., 69-352
Shiro, Y., 69-2627
Shiroma, A., 69-2075
Shitov, Yu. V., 69-445
Shive, P. N., 69-2654
Shmakin, B. M., 69-3264
Shnip, O. A., 69-2735
Shoemaker, E. M., 69-2706
Shteynberg, G. S., 69-3476
Shugurova, N. A., 69-2170
Shukla, R. K., 69-97
Shukolyukov, Yu. A., 69-386, 447, 485, 1258, 1372, 2741
Shul'pyakov, Yu. F., 69-2055
Shultz, C., 69-2174
Shumyatskaya, N. G., 69-2904, 2919
Shurko, I. I., 69-2508
Siat, A., 69-655
Siddiqui, M. K. H., 69-987
Siddiquie, H. N., 69-110
Sidorenko, G. A., 69-564, 1466, 3344
Sidorenko, Z. V., 69-1998
Siedner, G., 69-1636
Siegel, F. R., 69-884, 3512
Siegers, A., 69-3437
Siemes, H., 69-1839
Sierra Lopez, J., 69-622
Sighinolfi, G. P., 69-1347, 1410, 1412, 1576, 3142, 3161, 3270
Sigurdsson, H., 69-1652
Sigurgeirsson, T., 69-759, 2658
Sigvaldason, G. E., 69-758, 1359, 1653, 2211, 2212
Sikorskaya, E. K., 69-1204
Silin, Yu. I., 69-1817, 2735
Sillitoe, R. H., 69-1267, 3628
Silver, E. A., 69-2176
Simboli, G., 69-3337, 3380
Simmons, G. C., 69-228, 2027, 3592

Simms, J. G., 69-1810
Simon, F. O., 69-965, 1851
Simon, J. A., 69-1341
Simonov, A. V., 69-281, 2058, 2617
Simonov, M. A., 69-1973, 1983, 2388
Simonov, V. I., 69-1986, 1993
Simons, P. Y., 69-2064
Simpson, D. R., 69-294, 2088, 3028
Simpson, I. M., 69-3615
Simpson, J. G., 69-1589
Sims, P. K., 69-2467, 2608
Sine, N. M., 69-1278
Singh, A., 69-1931
Singh, B., 69-3120
Singh, C. D. P., 69-3583
Singh, S., 69-3120
Singh, S. P., 69-2623
Singhal, J. P., 69-1001
Sinha, R. C., 69-3536
Sinha, R. N., 69-3504
Sinkankas, J., 69-879
Sinyakov, V. I., 69-3311
Sircoulon, J., 69-1353
Sironi, G., 69-2060
Sitler, R. F., 69-3494
Sitnin, A. A., 69-1287, 1290, 2172
Sitzia, R., 69-2637, 2638
Sivoronov, A. A., 69-1462
Sizova, L. D., 69-2058
Skalafuris, A. J., 69-494
Skarzhinskiy, E. N., 69-460
Skarzhinskiy, V. I., 69-1585
Skhirtladze, N. I., 69-3241
Skinner, B. J., 69-2632
Skinner, D. L., 69-2808
Skinner, H. C. W., 69-416
Skorobogatova, N. V., 69-2378
Skougstad, M. W., 69-1850
Skovordkin, N. V., 69-386
Skupin, K., 69-2513
Slansky, E., 69-2389
Slater, R. W., 69-2824
Slatkine, A., 69-2952
Slaughter, M., 69-159
Slivko, E. P., 69-412
Slobodskoy, R. M., 69-2459
Sluis-Cremer, G. K., 69-888
Smale, D., 69-927
Smales, A. A., 69-967, 2236
Smalley, I. J., 2691
Smart, J. G. O., 69-910
Šmejkal, V., 69-2721
Smilkstyn, A. O., 69-363
Smirnov, V. N., 69-452
Smith, B. L., 69-2605
Smith, C. J., 69-1780
Smith, D. G. W., 69-1943, 2564
Smith, D. K., 69-1836, 2757
Smith, F. G., 69-277, 1177, 2047
Smith, G. I., 69-2538
Smith, G. V., 69-850
Smith, J. V., 69-136, 137, 174, 501, 1989, 1992, 2272
Smith, M. A., 69-1200
Smith, M. H., 69-1759
Smith, P. J., 69-2656, 2658
Smith, R. E., 69-2598, 2599
Smith, R. G., 69-90, 2824
Smith, R. L., 69-2406
Smith, T. E., 69-218
Smith, V. C., 69-1725
Smith, W. C., 69-526
Smith, W. D., 69-6
Smith, W. H., 69-2227
Smith, W. L., 69-145
Smolin, P. P., 69-3079
Smothers, W. J., 69-2063
Smulikowski, K., 69-815, 816
Smyth, J. R., 69-1989, 2398
Snavely, P. D., 69-2717
Snead, R. E., 69-1688
Snelling, N. J., 69-7, 910, 3365
Snetsinger, K. G., 69-2800, 3316
Soboleev, Ch. S., 69-831
Sobolev, E. V., 69-2328
Sobolev, N. V., 69-372, 1648, 1649
Sobolev, N. V., Jr., 69-1586
Sobolev, V. S., 69-372, 1442, 2283, 2328, 3141
Soboleva, S. V., 69-2900, 2902
Society for Analytical Chemistry, 69-2753
Soffel, H., 69-2653
Sofoulis, J., 69-211, 259, 270
Soggetti, F., 69-2257
Sokolov, M. M., 69-430
Solans-Huguet, J., 69-1196
Soldatova, K. S., 69-448
Solomkina, S. G., 69-1466
Solomon, D. H., 69-1919, 2837, 2838
Solomon, M., 69-2955, 3427
Solov'eva, L. P., 69-1974
Solov'yev, A. T., 69-357
Solozhenkin, P. M., 69-857
Somanchi, S., 69-1532
Somayajulu, B. L. K., 69-2173
Somina, M. Ya., 69-1495
Somogyi, V. A., 69-2855
Sørensen, H., 69-1528
Souchier, B., 69-114, 2841
Soukeník, K., 69-498
Sourisse, C., 69-42
Southwick, D. L., 69-3313
Soyfer, V. N., 69-437, 456
Spain, I. L., 69-848
Speakman, K., 69-303
Spence, W. H., 69-3287
Spencer, A. B., 69-3431
Spencer, D. W., 69-2200
Spjeldnaes, N., 69-2728
Spooner, P., 69-3037
Spriggs, R. M., 69-3037
Springer, G., 69-64, 1530, 2341, 2346, 2350
Spry, A., 69-2821, 3602
Srebrodol'skiy, B. I., 69-2179
Sreekumaran, C., 69-1354
Sreenivas, B. L., 69-3579
Srikrishnan, T., 69-1951
Srinivasan, R., 69-124, 125, 1951, 3579
Srivastava, R. N., 69-3504
Srivastava, S. K., 69-2840
Staatz, M. H., 69-1778, 2480, 2718
Stabbins, R., 69-1143
Stacey, F. O., 69-2707
Stacey, J. S., 69-2810
Stager, H. K., 69-1121
Stainton, M., 69-1319
Stalder, H. A., 69-3617
Staněk, J., 69-608
Stanley, D. J., 69-3508
Stanley, E., 69-1025
Stanley, R. P., 69-338, 880
Stanton, N. B., 69-953
Stanton, R. L., 69-2090
Stanzione, D., 69-1578
Stark, H., 69-73, 968
Starkey, H. C., 69-1847, 2323
Starmer, I. C., 69-3456
Staronka, A., 69-3036
Starostin, V. I., 69-1743
Staudhammer, K., 69-1076
Stauffer, K. W., 69-2532
Stavrov, O. D., 69-361
Steck, A., 69-923
Steglaci, L., 69-1261
Stehli, F. G., 69-2819
Steinhauser, O., 69-2781
Steinike, K., 69-3515
Steinmetz, H., 69-2381, 2634
Steinnes, E., 69-1374
Stemprok, M., 69-1111
Stepan, E., 69-39, 129
Stepan, W., 69-1363
Stepanov, I. I., 69-3167
Stepanov, V. G., 69-147
Stephenson, D. A., 69-2272
Stepina, Z. A., 69-1270
Stern, T. W., 69-913, 1800, 1811, 3204
Sternberg, Y. M., 69-2216
Sterrett, T. S., 69-2635
Steven, T. A., 69-2475, 3522
Stevens, J. G., 69-2899
Stevens, N. C., 69-1106
Stevens, R. E., 69-1834, 1863
Stevenson, J. S., 69-1521
Stevenson, L. S., 69-1521
Stewart, A. D., 69-911
Stewart, D. B., 69-2645
Stewart, G. H., 69-280, 2824
Stewart, J. W., 69-1905
Stocco, S., 69-3211
Stöffler, D., 69-1170, 2250
Stokes, G. K., 69-44
Stolbov, Yu, M., 69-1257
Stolfa, D., 69-1470
Stoll, W. C., 69-201
Stolyarova, T. I., 69-2388
Stone, I. C., Jr., 69-3512
Stone, M., 69-1564, 3457
Storet, J., 69-2723
Storetvedt, K. M., 69-863
Stoyel, A. J., 69-1384
Strakhov, N. M., 69-2822
Strangway, D., 69-3610
Strangway, D. W., 69-1754
Stravinskaya, E. A., 69-2204
Streckeisen, A., 69-1715
Střelec, J., 69-498
Strelow, F. W. E., 69-2712
Strens, R. G. J., 69-291, 1033
Strizhov, V. P., 69-20, 417
Strom, R. G., 69-898
Strübel, G., 69-1193, 2085
Stubican, V. S., 69-288
Stueber, A. M., 69-3100
Stumpfl, E. F., 69-1497, 1883
Stussi, J.-M., 69-2423
Subramaniam, V., 69-781
Sudarsanan, K., 69-184
Sudo, T., 69-84, 1454
Sueno, S., 69-128
Sugimura, A., 69-630
Sugimura, T., 69-2101
Suguio, K., 69-592
Sukarhevsky, B. Ya., 69-1063, 2916
Sukhov, L. G., 69-3475
Sukhoverova, M. V., 69-363
Summerhayes, C. P., 69-391
Sun, C. N., 69-491
Sundelius, H. W., 69-2609
Sundius, N., 69-2575
Suprenant, N. F., 69-1650
Suprychev, V. A., 69-1477, 2193
Sushchevskaya, T. M., 69-1135
Süsse, P., 69-1051, 1077, 2376
Susuki, K., 69-1906
Sutarno, 69-1490
Sutherland, F. L., 69-1601
Sutherland, J. K., 69-1499
Sutor, D. J., 69-182
Sutton, G. H., 69-2706
Suvorov, S. A., 69-286
Suwa, K., 69-1469
Svensson, N.-B., 69-500
Sverdrup, T. L., 69-222, 1486
Svetlitskiy, N. I., 69-363
Sviridov, D. T., 69-1735
Svoronos, D.-R., 69-3110
Swanson, D. A., 69-3479, 3594
Swanson, F. J., 69-2772
Swanson, V. E., 69-1312, 13 1334, 3128
Sweatman, T. R., 69-821, 2801
Swenson, C. A., 69-2622
Swift, J. D., 69-2837, 2838
Switzer, G., 69-2595
Syamalarao, K., 69-952
Sychkova, V. A., 69-3224
Syers, J. K., 69-49
Sykes, L. R., 69-2699, 2819
Symons, D. T. A., 69-731
Syngayevskiy, E. D., 69-1940
Syono, Y., 69-1217
Syromyatnikov, N. G., 69-399
Szádeczky-Kardoss, E., 69-10 1207
Szalamacha, J., 69-751
Szalamacha, M., 69-751
Szalay, E., 69-2659
Széky-Fux, V., 69-1091
Szöör, G., 69-1682
Szpila, K., 69-371

Tabor, R. W., 69-2718
Tacl, A., 69-871
Taddeucci, A., 69-3109
Tagg, K. M., 69-2541
Taguchi, K., 69-400
Takahashi, T., 69-2625, 3047
Takeno, S., 69-2651
Takéuchi, Y., 69-1062
Talibudeen, O., 69-2842
Talukdar, S. C., 69-3420
Tamain, G., 69-3373
Tamhane, A. S., 69-3174
Tan, L.-P., 69-3323
Tan, T. T., 69-1599, 3425
Tan, W. C., 69-491
Tananayeva, G. A., 69-2862
Tandon, S. N., 69-1396
Tanguy, J.-C., 69-2426, 2504
Tanida, K., 69-2387
Tapia, O., 69-2961
Taramasso, M., 69-2831
Tarasevich, S. I., 69-2733
Tarasov, L. S., 69-915
Tarasova, R. S., 69-235
Tardy, Y., 69-1329, 2877
Tarling, D. H., 69-906
Tarney, J., 69-2274
Tastet, J.-P., 69-2863
Tatarskiĭ, V. B., 69-2362
Tatsumoto, M., 69-1378, 2717
Taylor, A. M., 69-340
Taylor, C. M., 69-28, 2019, 297
Taylor, D., 69-1745
Taylor, H. F. W., 69-180
Taylor, H. P., Jr., 69-3137
Taylor, R. B., 69-2467, 2568, 26
Taylor, R. G., 69-2950
Taylor, S. R., 69-745, 1308, 13 2168, 3083
Taylor, W. O., 69-1278
Tazieff, H., 69-3473
Tchalenko, J. S., 69-998
Tchoubar, C., 69-3050
Tedesco, C., 69-274
Telford, W. M., 69-896
Tempier, P., 69-3555
Tennant, W. C., 69-397, 971, 2
Terekhovich, S. L., 69-2147
Termain, J., 69-2087

NOVOĬ, V. I., 69-536
, M., 69-3366
ORE, J. C., 69-921
ENHORST, R., 69-86
, R. V., 69-894
CPAW, S. C., 69-2018
DEN, R. A., 69-1606
YER, T. P., 69-2473
NG, B. K. G., 69-93
OBALD, P. K., *Jr.*, 69-200, 81, 2962
UNISSEN, K., 69-3207
SBAUT, J., 69-868
EL, R., 69-56
MAS, H. H., 69-79, 1800, 1816
MAS, J., *Jr.*, 69-2829
MAS, T. M., 69-1760
MPSON, C. E., 69-1481, 1858, 1870, 1871, 2790, 2791, 2962
MPSON, G., 69-1558
MPSON, J. B., *Jr.*, 69-2048, 3049, 3003, 3072
MPSON, R. N., 69-752, 2109
MSON, M. R. A., 69-711
NON, P., 69-2876
RKILDSEN, C. D., 69-222
RNTON, I., 69-3162
RPE, A. N., 69-3198
RPE, R. I., 69-2386
EADGOLD, I. M., 69-3242
RRELL, R. G., 69-1674
Y, A. J. L., 69-2989
N, PEI-LIN, 69-596, 1942
HOMIROV, S. N., 69-3393
HOMIROV, V. P., 69-2531
HONENKOVA, E. G., 69-1340
AK, V. V. S. S., 69-3121
LANDER, H., 69-325, 328, 1240
LER, K. G., 69-87, 88, 1918
LING, R. I., 69-1294, 2309, 2478
CHENKO, A. KH., 69-1749
ESKOV, V. A., 69-1252
OFEEVSKIĬ, D. A., 69-1533
SERANT, D., 69-1798, 2711
OLLIER, J., 69-1338
AILEM, J., 69-474, 2232, 2233, 234
IN, R. C., 69-3602
D, W. C., 69-218
LIATTI, V., 69-1822, 3108
T, R. S. J. DU, 69-888
AREV, P. I., 69-1654, 3477
ER, N. I., 69-841
CHEL'NIKOV, YU. N., 69-687
EDO DE GODOY, M. C. F., 69-114
LON, F., 69-562, 869, 2021, 3077
OK, K. P., 69-582
STIKHIN, I. N., 69-447, 485
IAN, K., 69-148
IBLIN, J. F., 69-938, 942
ISAKA, T., 69-2126, 2127
ITA, K., 69-84, 1047, 2134
IOR, E., 69-1009, 1207
ISCHEV, O., 69-1009, 1207
KER, E. W., 69-1120
MS, J. S., 69-461
OPOV, N. A., 69-1221
RE DE ASSUNÇÃO, C., 69-3401
CHEK, P. H., 69-2513
CHIMICHI, J., 69-3027
BES, R. O., 69-885
RAY, J.-C., 69-1368, 1369, 2214, 215, 3064, 3168, 3296
RETTE, M., 69-907
RTELOT, H. A., 69-2177
ER, D. C., 69-341, 2135
ILL, R. J., 69-1525
N-HUYNH-ANH, 69-694
UTH, N., 69-1936, 2826

TRAUTZ, O. R., 69-185
TRAVERSA, G., 69-1456, 1457, 1640, 3378
TRDLIČKA, Z., 69-557, 567, 590, 591
TREILLET, M., 69-658
TRENDALL, A. F., 69-226, 924, 1095
TREVES, D., 69-1038
TREVES, S. B., 69-2509
TREWIN, N. H., 69-1927
TRIAT, J.-M., 69-3276
TRICHET, J., 69-3110
TRIGILA, R., 69-960
TROJER, F. J., 69-1045, 1046
TROLL, G., 69-1804
TROMBE, J.-C., 69-851
TROMMSDORFF, V., 69-1617, 1696, 2669
TROSTYANSKIY, G. D., 69-405
TROTTER, F. M., 69-2415
TRUEB, L. F., 69-3305
TRUESDELL, A. H., 69-299
TRUFANOV, V. N., 69-632
TRURNIT, P., 69-1692, 2513
TSIMBALIST, V. G., 69-1104
TSINOBER, L. I., 69-2998
TSINZERLING, E. V., 69-2618
TS'ON, O. V., 69-23
TSUCHIYA, T., 69-1548
TSUZUKI, Y., 69-2294
TSYURUPA, I. G., 69-2181
TUFAR, W., 69-534, 791, 1124, 2937
TUGARINOV, A. I., 69-21
TUMULURI, S., 69-781
TURCOTTE, D. L., 69-757
TURI, B., 69-954
TURKEVICH, A. L., 69-2706
TURKOWSKY, C., 69-968
TURLEY, T. J., 69-470
TURNER, A. R., 69-2964
TURNER, D. C., 69-1624
TURNER, F. J., 69-306, 2572
TURNER, R. G., 69-3547, 3602
TURNER, W. M., 69-928
TURNOCK, A. C., 69-1197
TUSHINGHAM, A. D., 69-986
TVALCHRELIDZE, G. A., 69-1092
TYCHINSKIY, A. A., 69-352
TYULENEVA, L. S., 69-2170

UBBELOHDE, A. R., 69-848
UDAS, G. R., 69-2995
UDOVKINA, N. G., 69-817
UEDA, T., 69-1047, 1977
ULMER, G. C., 69-2063
ULRYCH, J., 69-524, 593
UMEGAKI, Y., 69-2627
URBAIN, G., 69-280
URBAN, H., 69-1107
UREY, H. C., 69-1394
URIEN, C. M., 69-3512
URQUHART, G., 69-2031
URUNBAYEV, K. U., 69-689
URUSOV, V. S., 69-135, 1253
USDOWSKI, H.-E., 69-2513
USHAKOVSKIY, V. T., 69-2617
USKOV, M. V., 69-2453
USTINOV, V. L., 69-417
UTKINA, T. F., 69-3319

VACHETTE, M., 69-2710
VAGLIASINDI, G., 69-1504
VAIL, J. R., 69-3450
VAKHRUSHEV, V. A., 69-1104, 3307
VALOV, P. M., 69-859
VALYASHKO, V. M., 69-3169
VALYUZHENICH, Z. L., 69-2559
VAN ALSTINE, R. E., 69-2224, 3357
VAN ANDEL, T. H., 69-1558
VAN BEMMELEN, R. W., 69-1795
VAN DER LUGT, W., 69-187
VAN DER MAREL, H. W., 69-993, 2844
VAN DER WEIDE, B. M., 69-46
VAN HOEVEN, W., 69-3124
VAN LANDINGHAM, S. L., 69-491
VAN LOENEN, R. E., 69-3204, 3205
VAN N. DORR, J., 69-227
VAND, V., 69-2361
VANNEY, J. R., 69-393
VAN OOSTERWYCK-GASTUCHE, 69-1444, 3261
VAN RENSBURG, W. C. J., 69-2896, 2982, 3327, 3410, 3529
VAN SCHMUS, W. R., 69-1401, 3183
VANŠICKLE, G. H., 69-59, 2791
VAN TASSEL, R., 69-1515
VAN WAMBEKE, L., 69-1771
VARADARAJAN, S., 69-3573
VARET, J., 69-3212
VARINA, T. M., 69-2644
VARMA, S. N., 69-3464
VARNE, R., 69-2496
VARSHAVSKIĬ, A. V., 69-2055, 3303
VASIL'YEV, YU., R., 69-2304
VAS'KOVSKIY, D. P., 69-2741
VAUGHAN, G. N., 69-2824
VAUGHN, W. W., 69-1877, 1889, 2787
VAVŘÍN, I., 69-674
VAYNSHTEYN, É. E., 69-859
VDOVYKIN, G. P., 69-490, 1365
VEDAM, K., 69-847, 3603
VEDDER, W., 69-3053
VEEN, A. W. L., 69-169
VEEVERS, J. J., 69-1792
VEIGA FERREIRA, O. DA, 69-2729
VEKILOV, B. G., 69-3501
VELASCO, C., 69-2961
VELDE, B., 69-1452, 2825, 3051
VELDE, D., 69-2418, 3263
VENIALE, F., 69-993, 1809, 2257, 2557, 2831, 3065, 3339
VENKOBA RAO, N., 69-3247
VERESHCHAGIN, L. F., 69-1165
VERESHCHAGIN, L. P., 69-1183
VERGUNOV, G. P., 69-2455
VERKAEREN, J., 69-3022
VERNON, M. J., 69-3, 2740
VERNON, R. H., 69-743, 2265
VERTUSHLOV, G. N., 69-3170
VERZILIN, N. I., 69-2529
VESPIGNANI-BALZANI, G. C., 69-2809, 3096, 3098
VESSBY, E., 69-2576
VETSHTEYN, V. E., 69-437
VIAENE, W., 69-3022, 3023, 3024
VIAN, R. W., 69-2567
VIANELLI, G., 69-1678
VIDAL, P., 69-2711
VIERTL, J. R. M., 69-2720
VIETEN, K., 69-3256
VIJAYAM, B. E., 69-3580
VIKTOROVA, M. E., 69-379
VILLE, P., 69-3488
VILLIGER, H., 69-1837, 2906
VILMINOT, J.-C., 69-3306
VINCENT, E., 69-3493
VINE, F. J., 69-2819
VINOGRADOV, A. P., 69-389, 424, 490, 2217
VINOGRADOVA, R. A., 69-3224, 3258, 3532
VIOLO, M., 69-1099, 1108, 1125, 1132, 1503
VISTELIUS, A. B., 69-1637, 2511
VISWANATHAN, K., 69-1472, 1840
VISWATHANARAYANA, U., 69-3121
VITERBO, C., 69-2589
VITRAC, A., 69-2722
VLASOV, A. YA., 69-1751
VLASOVA, L. S., 69-456
VOGEL, D. E., 69-2424, 3217
VOGEL, R., 69-2247, 3182
VOGEL, T. A., 69-2605, 3287
VOGLER, M., 69-3168
VOLBORTH, A., 69-2823
VOLCHANSKAIA, I. K., 69-515
VOLKOV, I. D., 69-1306
VOLKOV, I. I., 69-429, 1315, 1316, 3134
VOLKOVA, N. V., 69-452
VOLL, G., 69-1804
VÖLLENKLE, H., 69-2914
VOLLRATH, J. D., 69-67
VOLYNETS, V. F., 69-80, 344, 390
VON BACKSTROM, J. W., 69-2940, 3534
VON ELLER, J. P., 69-654
VON ENGELHARDT, W., 69-2250
VON FRAGSTEIN, P., 69-2781
VON KNORRING, O., 69-581, 2363
VON KOENIGSWALD, G. H. R., 69-497
VON KÖNIG, U., 69-172
VON RAUMER, J. F., 69-3562
VON REICHENBACH, H. G., 69-91
VON TURKOWSKY, C., 69-73
VOROB'YEV, G. G., 69-496
VOROB'YEVA, I. N., 69-435
VORONKOV, A. A., 69-1982, 2904, 2919
VOSKANYAN, R. A., 69-2068
VOSKRESENSKAYA, I. E., 69-2269
VOZNYAK, D. K., 69-1298
VRÁNA, S., 69-509
VROMAN, A. J., 69-1793
VUAGNAT, M., 69-668, 1802, 2495, 3372
VUORELAINEN, Y., 69-1536, 3227

WAARD, D. DE, 69-2601, 2603, 3591
WADA, K., 69-2908
WADSLEY, A. D., 69-150, 171
WAGENER, H. D., 69-2404
WAGER, L. R., 69-630
WAHL, F. M., 69-102
WAHLBERG, J. S., 69-398, 2788, 2802
WAHLSTROM, E. E., 69-1901
WAI, C. M., 69-1201
WAKITA, H., 69-387
WALAWENDER, M. J., 69-1164
WALDBAUM, D. R., 69-843, 1167, 2048, 2049, 2314, 3003
WALDROP, L., 69-1080, 1081
WALITZI, E., M., 69-144
WALKER, E. G., 69-2872
WALKER, G. P. L., 69-2658, 3445
WALKER, G. W., 69-2481, 3479
WALLACE, C. A., 69-1954
WALLIS, R. H., 69-626
WALLS, R., 69-314
WALSH, J. N., 69-2777
WALTERS, L. J., *Jr.*, 69-3340
WALTHAM, A. C., 69-1093
WANG, C.-Y., 69-1162, 2408, 3598
WANLESS, L., 69-31
WARD, F. N., 69-948, 1872, 1878
WARDLAW, N. C., 69-2536
WARING, C. L., 69-975
WARNAARS, F. W., 69-2424
WARR, J. J., *Jr.*, 69-2367
WARREN, H. V., 69-3166
WASHINGTON, W. D., 69-978
WASSON, J. T., 69-1201, 1396, 3189
WATANABE, T., 69-81
WATKINS, N. D., 69-2500, 2658
WATSON, D. P., 69-701

Watson, J., 1707
Watson, K. D., 69-3590
Wazny, H., 69-415
Weaver, C. E., 69-1910, 2551
Webb, J. S., 69-3162
Webb, R. W., 69-1898
Webber, G. R., 69-67, 1278
Weber, J. B., 69-96
Weber, J. N., 69-1314
Weber, K., 69-922
Weber, M., 69-3609
Webster, R., 69-334
Wedepohl, K. H., 69-3150
Wedow, H., *Jr.*, 69-2020
Weed, S. B., 69-96, 2899
Weeks, A. D., 69-2080
Weiblen, P. W., 69-29, 2167
Wiehrauch, J. H., 69-3195
Weil, R., 69-655
Weill, D. F., 69-1226
Weir, C. E., 69-127
Weisbrod, A., 69-1174, 3552, 3553
Weiser, D., 69-766
Weiser, T., 69-2333
Welch, C. M., 69-2683
Welday, E. E., 69-2548
Wells, J. D., 69-2226
Wemple, S. H., 69-2642
Wenban-Smith, A. K., 69-1829
Wendt, I., 69-908
Wenk, E., 69-1712, 3291, 3563
Wenk, H.-R., 69-1617, 2891, 3048, 3291
Wershaw, R. L., 69-3125
West, H. W. H., 69-2824
West, T. S., 69-2783
Westbrook, J. H., 69-2621
Wetherill, G. W., 69-1201, 2713, 3175
Wey, R., 69-2775, 3039, 3040
Wharton, D. G., 69-2824
Wheat, T. A., 69-280
Wheeler, E. P., *2nd.*, 69-1549
Wheeler, R. L., 69-16
White, A. J. R., 69-2168, 3428
White, A. M., 69-200
White, D., 69-2824
White, D. E., 69-1359, 2212
White, J., 69-90, 1181, 3013
White, R. K., 69-473
White, W. A., 69-2854
White, W. S., 69-1557
Whitlow, J. W., 69-200
Whittaker, E. J. W., 69-2301
Whittig, L. D., 69-315
Wickam, D. C., 69-3010
Wickman, F. E., 69-3286
Wickramasinghe, N. C., 69-471
Widdowson, J. R., 69-551
Wieden, P., 60-1020
Wiersma, J., 69-169
Wieseneder, H., 69-2573
Wiik, H. B., 69-1400
Wilbanks, J. R., 69-2487
Wilcox, R. E., 69-1425
Wildman, W. E., 69-315
Wilkins, R. W. T., 69-3053
Wilkinson, J. F. G., 69-5, 630, 1476, 1639
Williams, B. J., 69-1673
Williams, D. W., 69-2997
Williams, E., 69-1995
Williams, G. E., 69-911, 1670
Williams, G. H., 69-3037
Williams, J. M., 69-2295
Williams, M., 69-1566
Williams, M. W., 69-2641
Williams, P. F., 69-741
Williams, P. M., 69-432
Williams, S. A., 69-1538, 2342
Williams, X. K., 69-455, 464, 465
Willkomm, H., 69-2743
Willman, H. B., 69-1000
Willshee, J. C., 69-1181, 3013
Wilson, A. F., 69-3587
Wilson, E. E., 69-2810
Wilson, M. J., 69-107, 2850
Wilson, R. L., 69-2658
Wilson, W. F., 69-1613
Winand, L., 69-844
Winder, C. G., 69-3514
Winkler, H. G. F., 69-1188, 1212, 1215
Witherspoon, P. A., 69-1366
Wittmann, A., 69-2914
Woensdregt, C. F., 69-2343
Wolf, R., 69-2689
Wolff, G. A., 69-132
Wollast, R., 69-3054
Wolstencroft, R. D., 69-476
Wolten, G. M., 69-194
Womack, C. M., *Jr.*, 69-1029
Wong, C., 69-2629
Wood, B. L., 69-213, 464, 712, 714
Wood, D. L., 69-512, 513
Woodford, A. O., 69-2548
Woodhead, P. M. J., 69-1314
Woodward, C., 69-55
Workman, D. R., 69-3572
Worrall, W. E., 69-2824
Worssam, B. C., 69-1674
Worthing, H. W., 69-947
Wright, A. C., 69-552
Wright, A. E., 69-1562
Wright, F. W., 69-3196
Wright, J. B., 69-283, 284, 702, 703, 861, 3288, 3456
Wright, J. C., 69-1926
Wright, J. E., 69-640, 1566
Wright, P. C., 69-1021
Wrucke, C. T., 69-265, 2305
Wuensch, B. J., 69-1082
Wyckoff, R. W. G., 69-988
Wyllie, P. J., 69-309, 1224, 3045
Yaalon, D. H., 69-444
Yada, K., 69-529
Yagi, K., 69-630
Yagi, S., 69-1892
Yajima, J., 69-2215
Yakhontova, L. K., 69-1083
Yako, M., 69-2282
Yakovlev, P. D., 60-1097
Yakovleva, A. K., 69-3245
Yamaguchi, G., 69-156, 316
Yamaguchi, N., 69-1873
Yanulov, K. P., 69-1539
Yardley, E. D., 69-2241
Yarenskaya, M. A., 69-613
Yaroshevskiy, A. A., 69-417
Yarzhemskiy, Ya. Ya., 69-1325
Yashina, R. M., 69-3455
Yasinskaya, A. A., 69-1766
Yasuhiko, S., 69-3035
Yasyrev, A. P., 69-2292
Yates, R. G., 69-1553
Yayovleva, M. E., 69-859
Yeend, W. E., 69-266
Yegorov, I. N. = Egorov, I. N.
Yen, T. P., 69-1600
Yermakov, N. P. = Ermakov, N.P.
Yershov, V. M. = Ershov, V. M.
Yoder, H. S., *Jr.*, 69-2115
Yokoi, T., 69-1961
Yokojama, Y., 69-2232
Yokoyama, H., 69-3184
Yokoyama, Y., 69-2136
Yoshida, S., 69-1854
Yoshimura, T., 69-1096
Yoshinaga, N., 69-2908
Youell, R. F., 69-2871
Youh, Chang-Ching, 69-1232, 1375, 1496
Young, D. A., 69-848
Young, E. J., 69-2545
Young, G. M., 69-3123
Young, R. A., 69-184, 852
Ypma, P. J. M., 69-2343
Yu, F.-S., 69-3323
Yudalevich, Z. A., 69-2944
Yund, R. A., 69-3230
Yur'yev, L. D., 69-521
Yushkin, N. P., 69-3219

Zabelin, V. A., 69-834, 2528
Żabiński, W., 69-1074, 2263, 3214
Zablocki, C. J., 69-1386
Zaburunnova, I. S., 69-2199
Zadorozhnyy, I. K., 69-80, 344, 894
Zagoruiko, N. V., 69-3611
Zakharchenko, A. I., 69-349
Zalashkova, N. E., 69-1290
Zanazzi, P. F., 69-1086, 2758, 3336
Zanettin, E., 69-2587
Zanettin Lorenzoni, E., 69-2503, 2585
Zankl, H., 69-2513
Zapata, H., 69-2961
Zarayskiy, G. P., 69-1743
Zarevich, I. P., 69-206
Zaripov, M. M., 69-147
Zaritskiy, P. V., 69-785, 2571
Zarka, A., 69-3600
Zavaritskiy, P. V., 69-2558
Zavarzina, N. I., 69-2903
Zeidler, W., 69-2749
Zeil, W., 69-3437
Zeissink, H. E., 69-111
Zeller, C., 69-575, 763
Zemann, J., 69-130, 1963, 264
Zeveleva, E. E., 69-423
Zezza, U., 69-1475, 2316, 328
Zhabin, A. G., 69-1619, 3453
Zharkova, T. M., 69-2671
Zhavoronko, G. P., 69-2929
Zheldakov, M. E., 69-272
Zheludev, I. S., 69-2068
Zhelyazkova-Panayotova, 69-3312
Zhiglinskiy, A. G., 69-76
Zhirmunskiy, A. V., 69-894
Ziehr, H., 69-2993
Zigan, F., 69-1964
Zijderveld, J. D. A., 69-266
Zimmerman, D. W., 69-22
Zimmermann, J.-L., 69-1367
Zimnoch, E., 69-574
Zink, J. B., 69-978
Zirpoli, G., 69-2440
Zítek, B., 69-248
Zlobin, B. I., 69-351
Znamenskiy, E. B., 69-3264
Zolotukhin, V. V., 69-1305,
Zoltai, T., 69-186, 1079
Zorina, N. G., 69-2915
Zotov, A. V., 69-1364
Zubenko, V. V., 69-2883
Zubkov, L. B., 69-3318, 3319
Zubtsov, E. I., 69-3398
Zubtsova, E. I., 69-3398
Zubynina, K. B., 69-3319
Zucchetti, S., 69-219, 2429, 2960, 2974
Zuev, V. V., 69-1734
Zuffardi, P., 69-2017
Zukas, E. G., 69-3191
Zussman, J., 69-1049
Zuyev, V. N., 69-3319
Zverev, V. L., 69-384
Zvyagin, B. B., 69-2302, 2902
Zykov, S. I., 69-21, 915
Zykova, I. S., 69-78
Zyuzin, N. I., 69-540, 1586, 2304

SUBJECT INDEX

to *Mineralogical Abstracts, vol.* 20. Names of REGIONS are printed in small CAPITALS. Subjects in lower-case roman, and *localities* in italics.

· v. Switzerland
· massif v. Switzerland
rdebrug v. Belgium
idzi v. Ghana
ieytown v. Ireland
rdeenshire v. Scotland
rfoyle, Tasmania v. Australia
r-Ildut, Finistère v. France
oisso v. Ivory Coast
sarokite – shoshonite – banakite series, *Wyoming,* mineralogy, anal., 69-3430
ukumalite, 69-296
cessory minerals, *Austria,* in gneiss, granite-gneiss and granulite, 69-819 ; *Italy,* in granite, 69-3381 ; *Quebec,* in bentonite, 69-1943
tinolite, analyses, 69-2283 ; *California,* anal., opt., X-ray, 69-3251 ; *Czechoslovakia,* in massif, anal., 69-2275 ; *Labrador,* in Fe formation, anal., opt., unit cell, sp. gr., 69-2279 ; *Mysore,* in schist, chem., opt., X-ray, 69-3250 ; *Quebec,* in Fe formation, anal., 69-2280 ; *Siberia,* anal., opt., X-ray, 69-3258 ; *Skye,* anal., 69-1706
tivation analysis, lanthanide elements in rocks, 69-69 ; RE in orthite, 69-964 ; tr. elements in meteorites, 69-967
lak, Skellefte v. Sweden
lamaoua v. Cameroon
lamellite, *Antarctica,* age, 69-901 ; *New South Wales,* -dolerite hybrid, 69-1645 ; *South Africa,* charnockitic porphyry, 69-3534, 3570
lamello v. Italy
massif v. Italy
lamite, 69-2397
lams Co. v. Colorado
lelite group, structure, 69-1085
lilabad, Andhra Pradesh v. India
linoles, *western Alps,* petrography, origin, 69-2433
lirondacks v. New York
lrano, Sicily v. Italy
lularia, calculated powder patterns, 69-2757 ; electrical conductivity, 69-855 ; O mobility in, 69-366 ; structural changes in hydrolytic environments, 69-151
·girine, indium—, synthesized, 69-2104 ; Sc analogue synthesized, opt., X-ray, 69-308 ; *Labrador,* in Fe formation, anal., opt., unit cell, 69-2279
·-augite, *Labrador,* in Fe formation, anal., opt., unit cell, 69-2279, with arfvedsonite, chem., opt., 69-527
·nigmatite, synthesis, X-ray, 69-2109 ; *Russian SFSR,* X-ray, 69-2109
GHANISTAN, *Badakhshan, Sar-e-Sang,* afghanite, 69-617
ghanite, *Afghanistan,* comparison with cancrinite, 69-617, in lazurite, opt., anal., X-ray, 69-617
RICA, continental drift, 69-1787, 1788, 1789 ; mining, 69-195 ; *Lebombo-Nuanetsi, southern Africa,* associated acid and basic rocks, 69-2155 ; *Sahara,* pyrophyllite, 69-1004 ; *west Africa,* age determinations, 69-2819
frikanda v. Russian SFSR
fshar v. Iran
gate, *Queensland,* localities, 69-336 ; *Western Australia,* localities, 69-1245
Age-determination, ^{26}Al of eucrite, 69-3180 ; apatite-sphene fission tracks, 69-2742 ; Ar/Ar method of K/Ar dating, 69-24 ; Ar/Ar of ground-water, 69-447 ; ^{14}C and Earth's magnetic field, 69-916 ; ^{14}C theory, 69-2743 ; Cl/Ar of meteorites, 69-3193 ; combustion of samples for radioactive dating, 69-1821 ; determination of radiogenic Ar, 69-1818, 1820 ; geological interpretation of results, 69-1819 ; graphic treatment of experimental data, 69-1823 ; He/Ar of gas reservoir, 69-447 ; importance of tritium, 69-1805 ; influence of atomic bomb on ^{14}C, 69-1805 ; K/Ar, excess ^{40}Ar in chlorite, 69-2741 ; K/Ar of basaltic rocks, 69-2739 ; K/Ar of hydrothermal mineralization, 69-25 ; K/Ar of meteorites invalid, 69-3194 ; K/Ar of micas, feldspars and ultrabasites, 69-2738 ; K/Ar of xenoliths in ultramafic rocks, 69-2741 ; Pb/Pb of galena, review of data, 69-915 ; Pb/Pb of meteorite, 69-486 ; radiation, of Ca-rich achondrites, 69-3179 ; Rb/Sr of hypersthene chondrites, 69-3175 ; Rb/Sr, standard feldspar for, 69-2740 ; thermoluminescence of pottery fragments, 69-22 ; ^{238}U fission track in biotite, 69-1822 ; *Alaska,* K/Ar of basalts, 69-2406, K/Ar of batholith, 69-1812 ; *Aldan,* Pb/U/Th on rocks, 69-21 ; *Alps,* gneiss, 69-800, radiometric, 1957 to 1962 data, 69-1802, U/Pb of zircons, 69-15 ; *Angola,* Rb/Sr on biotite and muscovite, 69-2, Rb/Sr of biotite in basement, in syenite, 69-1591 ; *Antarctica,* ^{14}C and K/Ar of glacial activity, 69-1799, K/Ar of biotite in diorite, 69-1800, K/Ar and Rb/Sr of adamellite, 69-901, of trachyte, 69-2509, Pb-α of zircon in diorite, 69-1800, Rb/Sr of dolerite dykes, 69-902 ; *Apennines,* radiometric, 1957-1962 data, 69-1802 ; *Aquitaine,* Rb/Sr and Sr/Sr of biotite in granite and sediments, 69-1 ; *Argentina,* K/Ar of basalts, 69-728 ; *Arizona,* U deposits, 69-2980 ; *Atlantic Ocean,* K/Ar on pyroclast, 69-2508 ; *Australia,* Rb/Sr of acid-leached shale, 69-3 ; *Austria,* Rb/Sr of gneisses, 69-3527 ; *Baltic Shield,* K/Ar of Jotnian, 69-2731 ; *Baveno,* Rb/Sr of biotite in granite, 69-12 ; *Brittany,* radiometric, 1957 to 1962 data, 69-1802 ; *California,* ^{14}C on salt body, 69-2538, K/Ar on albite, pyroxene and glaucophane in schist, 69-3284, K/Ar on biotite in gneiss, 69-913, K/Ar of feldspar from monzonite, 69-913, K/Ar of schists, 69-1815, of schists, 69-1816, Pb/Pb of zircon from gneiss, 69-913, radiometric of granitic rocks, 69-3434 ; *Cameroon,* Sr on crystalline rocks, 69-900 ; *Canada,* fission track of glass from crater, 69-2720 ; *Caucasus,* Io/U of volcanics, 69-384 ; *Channel Is.,* radiometric, 1957 to 1962 data, 69-1802 ; *Chile,* K/Ar on muscovite from greisen, 69-1267, K/Ar on biotite from ignimbrite, 69-1267 ; *Cocos Is.,* K/Ar of volcanics, 69-2452 ; *Colorado,* K/Ar and Rb/Sr of ring-dyke complex, 69-3451, Rb/Sr chronology of Precambrian, 69-2713 ; *Connecticut,* Rb/Sr of pegmatites, 69-2715 ; *Cornwall,* K/Ar on mica from granite, 69-3365 ; *Devon,* K/Ar of lavas, 69-2657 ; *Easter Is.,* K/Ar of basalts, 69-862 ; *Elba,* of granite, 69-905 ; *England,* K/Ar of dolerite, 69-910 ; *Enisei range,* Rb/Sr of granitic rocks, 69-19 ; *Ethiopia* K/Ar of volcanism 69-678 ; *Faeröe Is.,* ^{14}C of ash in peat, 69-1808, K/Ar of lavas, 69-906 ; *Fiji,* radiometric of igneous rocks, 69-7 ; *France,* ^{14}C of scoriae, 69-9, Pb of granite, 69-2723, Pb of greywacke, schists, gneisses and intrusives, 69-1803, Rb/Sr of charnockite, 69-2722, Sr of crystalline series, 69-907 ; *Germany,* ^{14}C of groundwater resources, 69-1805, K/Ar of hornblende from basement, 69-1804, of pitchblende, 69-908, regression treatment to Rb/Sr and Sr/Sr of granites, 69-908 ; *Hawaii,* anomalous due to radiogenic Ar in inclusions, 69-912, K/Ar of marine clays, 69-1008 ; *Idaho,* Pb-α on zircon in syenite, 69-2470 ; *India,* K/Ar of Precambrian rocks, 69-2725 ; *Italy,* K/Ar and Rb/Sr of igneous rocks, 69-2726, K/Ar of biotite and hornblende, 69-13, of granite, significance of zircon morphology, 69-1809, of monzonite, 69-3389, radiometric on biotite in monzonitic rocks, 69-11 ; *Ivory Coast,* Sr/Sr of charnockites and granodiorites, 69-2710 ; *Ivrea,* Pb/Pb of basic rocks, 69-12 ; *Japan,* ^{14}C, evolution of volcano, 69-764 ; *Juan Fernandez Is.,* K/Ar, 69-862 ; *Karelia,* K/Ar of charnockites, 69-2732 ; *Macao,* Rb/Sr of granites, 69-2730 ; *Malagasy Republic,* Rb/Sr of syenites, 69-1595 ; *Massif Central,* 69-10, K/Ar of granite, 69-2724, radiometric, 1957 to 1962 data, 69-1802 ; *Mauritania,* on biotite, feldspar, whole rock in alkaline rocks, 69-3402 ; *Minnesota,* K/Ar and Rb/Sr of biotite in metamorphic rocks, 69-2613, Rb/Sr of gabbro and sill, 69-2716 ; *Morocco,* K/Ar on biotites, Miocene-Pliocene boundary, 69-1798, K/Ar of orogenic phases, 69-899, K/Ar of tuff and phonolite, 69-2711 ; *Mururoa,* ^{14}C and Io/U of atoll, 69-18 ; *Natal,* Rb/Sr of rhyolite and granophyre, 69-2155 ; *Nevada,* K/Ar of volcanic rocks, 69-2816 ; Pb-α and K/Ar of plutons, 69-1811, radiometric of zircon in granitoids, 69-3204 ; *New Jersey,* Sr/Sr on argillite, diabase, granophyre, syenite, 69-3458 ; *New Mexico,* K/Ar of rhyolites, 69-2406, of Precambrian, 69-1609, Pb of U ores, effect of Ra migration, 69-1813 ; *New South Wales,* K/Ar on volcanic rocks, 69-5 ; *Norway,* ^{14}C of ash in peat, 69-1807, error in K/Ar of eclogite, 69-2728, K/Ar of biotite in gneiss, 69-16, of dolerite dykes, 69-863, Rb/Sr of gneisses, 69-16, Rb/Sr of igneous rocks, 69-2727 ; *Ontario,* Sr/Sr and Rb/Sr of Grenville orogeny, 69-1801, U/Pb of zircon and K/Ar of mica in conglomerate, 69-903 ; *Oregon,* Pb of rocks, 69-2717 ;

Age-determination *(contd.)*
Polynesia, K/Ar of crystalline rocks, 69-17 ; *Portugal*, ^{14}C of wood charcoal, 69-2729 ; *Pyrenees*, radiometric, 1957 to 1962 data, 69-1802 ; *Quebec*, K/Ar of syenite, 69-904 ; *Queensland*, of granites, 69-6, K/Ar, Rb/Sr of granites, 69-2719 ; *St. Helena*, K/Ar of lavas and intrusives, 69-1810 ; *Saskatchewan*, K/Ar of sylvine, 69-2536 ; *Scotland*, K/Ar, Rb/Sr of Torridonian, 69-911, of Precambrian orogenies, 69-1806 ; *Shetland*, of sandstone and contemporaneous rocks, 69-909 ; *Siberia*, K/Ar of dyke rocks, 69-2000, K/Ar of kimberlites and ultrabasic inclusions, 69-1817, K/Ar of traps, 69-687, 2733, of basaltic rocks, 69-3399, of oil field from Ti minerals, 69-2694, U, Th/Pb of alkaline rocks, 69-1823 ; *Siberian platform*, K/Ar of diabase, 69-2458 ; *South Africa*, biotite from hypersthene granite, 69-3571, U/Th/Pb of pegmatites, 69-2712 ; *South America*, review, 69-2819 ; *Southern Africa*, Rb/Sr of acid and basic igneous rocks, 69-2155 ; *South-west England*, of slates and phyllites, 69-3547 ; *Soviet Central Asia*, K/Ar, whole rock of Pre-Mesozoic rocks, 69-2735 ; *Swaziland*, Rb/Sr of rhyolite and granophyre, 69-2155 ; *Sweden*, K/Ar of granite, of nepheline syenite, of Jotnian, 69-2731 ; *Switzerland*, K/Ar of micas and hornblendes in gneisses and amphibolites, 69-14 ; *Transbaikalia*, K/Ar of Mo-W deposits, 69-2737, of greisens, 69-2736 ; *Turkmen SSR*, K/Ar whole rock on Pre-Mesozoic rocks, 69-2735 ; *Ukrainian SSR*, K/Ar of albitite, 69-1585 ; *Urals*, U, Th/Pb of alkaline rocks, 69-1823 ; *USSR*, Rb/Sr of pegmatite, 69-914 ; *Utah*, of uraninite, 69-1118 ; *Uzbeck SSR*, K/Ar of pre-Mesozoic rocks, 69-2735 ; *Vietnam*, granitoid massif, 69-237 ; *Volga-Ural*, K/Ar of glauconite and diabase, 69-20 ; *Vosges*, Rb/Sr of micas and rocks, 69-8 ; *Washington*, K/Ar of dykes, granodiorite and granite, 69-2718, Pb of rocks, 69-2717 ; *West Africa*, review, 69-2819 ; *Western Australia*, Sr/Sr of volcanics, 69-4 ; *Wyoming*, K/Ar and Rb/Sr of ring-dyke complex, 69-3451, Pb-α of zircon, 69-1814
Agly massif, Pyrénées v. France
Aguas Buenas quadrangle, Puerto Rico v. West Indies
Ahito mts. v. Togo
Aigues-Mortes, Gard v. France
Aikinite, *Uzbeck SSSR*, 69-224
Ain Nouba v. Tunisia
Aït-Ahmane v. Morocco
Aitutaki v. Pacific Ocean
Ajmer, Rajasthan v. India
Akita, Honshu v. Japan
Akkerman, Urals v. Russian SFSR
Akrochordite, crystallography, X-ray, 69-2374
Akzhaylyaus v. Kazakh SSR
Alabandite, *Brazil*, 69-2003 ; *France*, 69-2985
Alae, Hawaii v. Pacific Ocean
Alai range v. Tadzhik SSR
Ala-Kool, Lake Balkash v. Kazakh SSR
Alamos, Sonora v. Mexico
Alamosite, *Sonora*, structure, 69-141
Alanya v. Turkey
ALASKA. cymrite, 69-2897 ; laumontite, 69-2320 ; *Alaska range*, Pb, Zn, Ag, Cu, Mo in sediments, 69-463 ; *Black Mt., Seward peninsula*, mineralized veins, 69-1262 ; *Brooks range*, pyrophyllite, 69-1448 ; *Chulitna river, Alaska range*, geology and geochemistry, 69-2948 ; *Cook Inlet*, age of batholith, 69-1812 ; *Farewell, Alaska range*, geology and geochemistry, 69-2225, Pb-Zn-Ag ores, 69-236 ; *Fortymile dist.*, geochemistry, 69-2227 ; *Granite mt., Seward peninsula*, Ag, Pb, Zn, Mo, Bi deposits, 69-2977 ; *Hound Is., Keku Strait*, volcanic glass, 69-2465 ; *Kennecott copper mines, Wrangell mts.*, hydrothermal alteration, jarosite, 69-1699 ; *Koyukuk river region*, suggested areas for prospecting, 69-197 ; *Livengood, Yukon-Tanana upland*, tectonic inclusions, 69-2569 ; *Mount Katmai*, 1912 eruption ejecta, 69-2406 ; *Novarupta*, 1912 eruption ejecta, 69-2406 ; *Nunivak Is.*, basalts, 69-2406 ; *Prindle volcano, Yukon-Tanana upland*, inclusions in lava, 69-1651 ; *Ruth Creek, Livengood*, Au, 69-1105 ; *Serpentine-Kougarok area, Humboldt Creek*, cassiterite, 69-218 ; *Slana, Alaska range*, Au, Zn, Pb and Mo anomalies, 69-1387 ; *upper Chulitna*, ores, 69-260 ; *Valley of Ten Thousand Smokes*, kenotetrahedral magnetite, 69-3009 ; *Wood river—Tikchik lakes area*, geochemistry, 69-2229 ; *Yukon-Tanana upland*, asbestos, 69-3627
Alaska range v. Alaska
Alaskite, *California*, in dykes, anal., 69-2406 ; *Siberia*, Be in, 69-360
Alban hills v. Italy
Albany Co. v. Wyoming
Albarea, Val Chisone v. Italy
Alberni, British Columbia v. Canada
Alberta v. Canada
Albion range v. Idaho
Albite, calc. powder pattern, 69-1836 ; electrical conductivity, 69-855, 2652 ; high *T* thermodynamic properties, 69-1167 ; high *T*, X-ray, 69-2121 ; O mobility in, 69-366 ; production on K-feldspar core, 69-1230 ; synthesis, 69-3049 ; synthetic, electrical conductivity, 69-855 ; transformation to kaolinite or beidellite, 69-3050 ; *California*, in schist, anal., opt., age, 69-3284 ; *Egypt*, perthitic, in microcline, twinning, 69-1469 ; *Greece*, authigenic, opt., 69-2314 ; *India*, rims in granitic rocks, 69-3535 ; *Kamchatka*, metasomatic, in volcanic rocks, 69-2566 ; *Massachusetts*, crystallography, 69-2313 ; *Nigeria*, megacrysts in trachyte, 69-3456 ; *Norway*, in nepheline syenite and pegmatite, anal., X-ray, opt., structure, 69-2317 ; *Pakistan*, chess-board, 69-547 ; *Soviet Far East*, metasomatic in tuffs, 69-2566 ; *Spain*, dyke rock, 69-789
Albitite, shock-wave equations, 69-2626 ; *Congo*, anal., 69-679 ; *Mongolia*, metasomatic, mineralogy, anal., 69-2462 ; *Norway*, paragenesis, 69-1633 ; *Switzerland*, petrography 69-2590 ; *Ukrainian SSR*, anal., age, 69-1585
Albitization, *Spain*, 69-789
Albitophyre series, *Vosges*, anal., 69-2423
Alcaparrosa v. Chile
Aldan, Siberia v. Russian SFSR
Alder Creek, Custer Co. v. Idaho
Alençon, Normandy v. France
Aleutian Is. v. Pacific Ocean
Alexander Is. v. Antarctica
Alexandrite, simulated, 69-3067
Alexo mine, Ontario v. Canada
Algares de Portel, Evora v. Portugal
ALGERIA, *continental shelf*, silts and mu 69-3118 ; *Djebel Nader, Constanti* tripuhyite, 69-2377 ; *Kef Talrempt*, lit graphic limestone, 69-2517
Aligarh v. India
Aljustrel v. Portugal
Alkali metals, *Ukrainian SSR*, concent tions in salt deposits, 69-412
Alkaline earth elements, d.t.a. of me oxalates, 69-939
— complex, *Colorado*, 69-1778 ; *Con* 69-679, 1771
— rocks, differentiation processes, 69-240 effect of *T* on element distributi 69-1292 ; feldspathoidal, origin, 69-346 heat of cooling and crystallizati 69-1744 ; origin, 69-754, 3045 ; su differentiation processes, 69-240 *Angola*, geochemistry, petrology, 1591 ; *Brazil*, geology, 69-726 ; *Bushv* inclusions in carbonatite, 69-340 *Colorado*, rock types, 69-2468 ; *Czec slovakia*, xenoliths in Tertiary brec 69-673 ; *Greenland*, petrochemistry 69-635 ; *Mauritania*, age, petrology, 3402 ; *Pamirs*, eclogite xenoliths 69-3568 ; *Russian SFSR*, evolution magma, anal., 69-682, associated w fault, 69-684 ; *St. Helena*, age, 69-18 variation, 69-1588 ; *Siberia*, age, 1823, geochemistry, genesis, 69-16 types, anal., 69-690 ; *Tahiti*, anal., 2406 ; *Texas*, anal., petrography, 3431 ; *Transbaikalia*, F variation, 357 ; *Uganda*, 2 series, anal., opt., 2496 ; *Urals*, age, 69-1823
Alkalis, *Cornwall*, mobility in pegma relative to aplite, 69-3457
Alkanes, *Scotland*, isoprenoid in shale torbanite, 69-3113
Allacechenka v. USSR
Allactite, structure, 69-192
Allanite, Bi in, 69-3223 ; hardness, 69-32 in granite, Ce in, 69-378 ; *Nevada*, stream sediments, 69-2545 ; *South Afr* in pegmatite, 69-2712 ; *Tadzhik SS* activation anal. of rare earth elemer 69-964 ; *USA*, in ash beds, opt., X-r 69-1425
Allarechensk, Kola peninsula v. Russ SFSR
Allchar v. Yugoslavia
Allcharite, 69-2382 ; *Yugoslavia*, identi with goethite, 69-2337
Allevardite, similarity with insterstrati structure of sericite, 69-84 ; *Russ SFSR*, refr. ind., anal., X-ray, 69-283
Allitization, 69-1328
Allivalite, *Skye*, anal., origin, 69-1638
Allophane, anal. by small angle X- scattering, 69-81 ; reaction with Ca(OH 69-1917 ; studies in USSR, 69-192 thermal anal., 69-2851 ; *Germany*, dolomite, density, comp., genesis, 69-2
Alloys, Fe-Ni, isothermal compressi 69-2625
Almalyk v. Uzbek SSR
Almandine, equilibrium data, 69-121 from breakdown of chloritoid, 69-210 tr. element data, 69-2168 ; *Alto Ad* in schists, anal., 69-3211 ; *Arizona*, eclogite inclusions, anal., 69-359 *Honshu*, in hornfels, anal., 69-256 *Labrador*, in Fe formation, anal., o unit cell, sp. gr., 69-2279, in schist, an 69-2279 ; *New Zealand*, in gneiss, an 69-824
— -pyrope, opt. absorption spect 69-2643 ; *Russian SFSR*, 69-272

andine *(contd.)*
pessartite, *Cumberland,* anal., 69-2415
ria v. Spain
ora, Uttar Pradesh v. India
dei Masi, Alto Adige v. Italy
Rosso, Novara v. Italy
s Graies v. France ; Italy
s-Maritimes v. France
Cozie v. Italy
Occidentali v. Italy
v. Austria ; Europe ; France ; Italy ;
witzerland
i, Siberia v. Russian SFSR
i-Sayan, Siberia v. Russian SFSR
ite, *Colorado,* 69-2957
Valtellina v. Italy
Adige v. Italy
Ligonha, Zambezia v. Mozambique
Molocué v. Mozambique
Vicentino v. Italy
mina, effect of environment on melting
oint, 69-1163 ; production from anortho-
te, 69-1155 ; *Germany,* in talc, anal.,
)-2299
inerals, aqueous solubility, 69-319
minite, IR, 69-2637 ; *Hungary,* in
auxite, comp., X-ray, 69-1506
minium, affect on mobility of humic
id, 69-1330 ; complex with calmagite,
)-55 ; determination in cement by atomic
)sorption, 69-1876 ; direct microdeter-
ination in silicate minerals, 69-2779 ;
actionation in chondrites, 69-2249 ;
alkalic rocks, effect of *T* on, 69-1292 ;
meteorites and pallasitic olivines,
)-2240 ; rapid determination in Fe
es, 69-1875 ; selective migration in
ils, 69-2841 ; spectrophotometric deter-
ination, 69-944 ; XRF anal. in rocks,
)-1884 ; *Ardnamurchan,* in schist,
)-2288 ; *California,* in hornblendes,
)-2281 ; *France,* from borehole, strati-
aphical profile, 69-1317 ; *Kuriles,* re-
oved during alteration, 69-3107 ;
Mare Tranquillitatis, 69-2706 ; *Mexico,* in
)atite, 69-2370 ; *New Zealand,* in waters,
)-442 ; *Norway,* in nepheline and feldspar,
)-2317 ; *Ukrainian SSR,* in biotites and
)st rocks, 69-1460
ompounds : $AlBO_3$, synthesis, 69-3026,
)27; Al_2O_3, anodized, absorption data in
acuum UV, 69-2641; Al_2O_3, fabrication of
in-wall capillary tubes, 69-3037 ; Al_2O_3,
)t pressing, 69-3037 ; Al_2O_3, sintering
ixtures of powders, 69-3037 ; anti-
onate, absolute polarity, 69-132 ;
ydroxide, crystallization of gels,
)-2824 ; hydroxide and oxide, elec-
onoptical information, 69-1732 ; struc-
ure of $Na\beta\text{-}Al_2O_3$, 69-1066
sotopes, coupling tensors in kyanite,
)-133
Fe-Mn-ores, formation, book, 69-2822
minosilicates, formation of crystalline,
ydrous, 69-1225 ; leaching of gels,
)-3038 ; stability of hydrous, 69-3051 ;
ntario, relations with gedrite, 69-3588
mohydrocalcite, *Germany,* in dolomite,
nal., d.t.a., t.g.a., opt., X-ray, genesis,
)-2359
nite, from trachyandesite experiment-
ly, 69-1203 ; *Italy,* with clay minerals,
M, anal., X-ray, d.t.a., t.g.a., 69-2880 ;
ipari Is., in altered volcanic rocks,
)-1678 ; *Wyoming,* in claystone, 69-2539
nogen, IR, 69-2637
hite, studies in *USSR,* 69-1921
arantite, structure, 69-2931 ; *Chile,*
ructure, 69-1077
Amazon river v. Brazil
Amazonite *v.* amazon stone
Ambararata v. Malagasy Republic
Amber, *Baltic,* hardness and brittleness, 69-1733
Ambin massif, Cottian Alps v. Italy
Amblygonite, *Devon,* in pegmatite, X-ray, 69-3341
— –montebrasite series, X-ray, 69-3341
Ambodivohitra v. Malagasy Republic
Ambre mt. v. Malagasy Republic
Ambrosia lake v. New Mexico
America, Li, K, Rb and Cs in rivers and marine sediments, 69-1354
Amethyst, new imitation of Ba glass, refr. ind., sp. gr., 69-3068 ; *Western Australia,* localities, 69-1245
Amherst Co. v. Virginia
Amino acids, *Finland,* in Precambrian graphite and marble, 69-1259 ; *Germany,* in U. Jurassic reefs, 69-2513 ; *Pacific Ocean,* in sediments, 69-1312 ; *Rhodesia,* in Precambrian dolomite, 69-1259 ; *South Africa,* in Precambrian conglomerates and thucholite, 69-1259 ; *Transvaal,* in chert, 69-3135
Aminoffite, related to harstigite, 69-554
Amjhor, Bihar v. India
Ammanford, Carmarthenshire v. Wales
Ammonium compounds, disorder functions of cubic nitrate, 69-1024
Amosite, heat-treated, structural changes from IR, 69-522 ; *Mysore,* in Fe formation, anal., 69-3247
Ampangabéite, metamict, identification by γ-ray spectrum, 69-854
Amphibole asbestos, heat-treated, structural changes, IR, 69-522
Amphiboles, and coexisting plagioclase, Ca between, 69-3082 ; arfvedsonite-eckermannite series, cell parameters and comp., 69-3257 ; calciferous, of metamorphic rocks, paragenetic types, 69-1442 ; catalogue of anal. constants and references 69-3243 ; coexisting, elements between, anal., 69-3252 ; comp. in jadeite-glaucophane metamorphism, 69-520 ; ferruginosity with temp. of metamorphism 69-2283 ; in granulitic facies, reactions, 69-3249 ; in metamorphic rocks, paragenesis, 69-2283 ; isomorphous substitution diagram, 69-519 ; magnetic moment of Fe^{2+}, 69-858 ; O content, 69-3244 ; representation of anal. in 11-dimensional space, 69-1443 ; *Ben Nevis,* anal., 69-638 ; *Bohemian massif,* in skarns, 69-790 ; *California,* alkali, in blueschist facies, anal., opt., X-ray, 69-3251, coexisting from blueschist facies, anal., X-ray, 69-3254; *India,* in kaersutite–barkevikite series, chem., opt., 69-3259 ; *Inverness-shire,* in metamorphosed syenite, anal., 69-1708 ; *Massachusetts,* coexisting in amphibolite, anal., 69-3253 ; *New Caledonia* coexisting in metachert, anal., X-ray, 69-3254 ; *New South Wales,* in inclusions in basic pipes, anal., opt., 69-3428 ; *New York,* with talc, 69-145 ; *Quebec,* age, 69-904 ; *Siberia,* isomorphism in, 69-3260 ; *Skye,* from Moine Nappe, anal., 69-1441 ; *Spain,* reaction rims in olivine gabbro, 69-2424 ; *Sweden,* opt., 69-2411 ; *Transbaikalia,* F variation in alkalic rocks, 69-357
—, Na-, *Austria,* structure, 69-144
Amphibolite, anal., statistics, 'false correlation', 69-453 ; ortho- and para-, 69-3542 ; ortho-, world review of Cu in, 69-421 ; *France,* leaching, anal., 69-1329 ; *Germany,* age, 69-1804 ; *India,* structural anal., 69-3585 ; *Italy,* compared chemically with prasinites, 69-1343, gabbroic, chem., paragenesis, origin, 69-2589 ; *Japan,* anal., geology, 69-2282 ; *North Carolina,* anal., origin, 69-3544 ; *Ontario,* Ti in micas in as metamorphic grade indicator, 69-1723 ; *Portugal,* in breccia, 69-2582 ; *Romania,* 69-1716 ; *Scotland,* metamorphic segregation in, anal., 69-2577 ; *Siberia,* anal., 69-3394 ; *Spain,* sill, petrography, 69-659 ; *Switzerland,* age, 69-14, hornblende fabric in, 69-2489, petrography, 69-2590, zoned by plagioclase, An content, 69-3563
—, almandine, *Ontario,* Ti in micas as metamorphic grade indicator, 69-1723
—, epidote, *Italian Alps,* petrography, genesis, anal., 69-1711
Amphibolitization, of eclogite, 69-816
Amygdales, *Russian SFSR,* jadeiite in, 69-1721
Anakie, Queensland v. Australia
Analcite, Ca-, X-ray compared with synthetic wairakite, 69-2324 ; synthesis from pyrophyllite and montmorillonite, 69-2134 ; *Austria,* in sediments, 69-786 ; *California,* in evaporites, 69-1324, in tuffs, 69-2319 ; *Cornwall,* in gabbro, 69-2666 ; *Crimea,* tetragonal in tuffs, anal., d.t.a., X-ray, 69-3299 ; *Montana,* in analcitite, anal., 69-1476 ; *New Zealand,* in tinguaite, anal., 69-1476
Analcitite, *Montana,* mineralogy and chemistry, 69-1476
Anantagiri, Andhra Pradesh v. India
Anatase, *P-T* studies, 69-2064 ; *Austria,* with brookite and rutile, paragenesis, 69-2330 ; *Italy,* authigenesis in granitoid rocks, 69-2557 ; *Rhode Is.,* gem, 69-1246
Anatolia v. Turkey
Anauxite, *California,* anal., 69-2860
Andalusite, possible 'sunstone' of Vikings, 69-2690 ; stability and metamorphic pressures, 69-306 ; *California,* mineralogy and paragenesis of deposit, 69-2329 ; *Kola peninsula,* paramorphs of kyanite on, 69-1718 ; *Ontario,* relations with gedrite, 69-3588 ; *South Australia,* pretectonic crystallization, 69-2600
Andersonite, *Utah,* X-ray, 69-1118
Andes v. Chile
Andesine, *Italian Alps,* -corundum veinlets, 69-806 ; *Italy,* in porphyrite, twinning, 69-2316
Andesite, average Au in, 69-3102 ; calc-alkali, origin in orogenic belts, 69-2499 ; Co, Cr, Ni, Sc, V in, 69-2168 ; experimental melting, 69-1218 ; magma from upper mantle, 69-2168 ; origin, 69-754 ; reactions of water and NaCl with, 69-1202 ; salt from weathering, 69-2208 ; *Brazil,* 69-2486 ; *Haiti,* spherulitic growth rate, 69-2167 ; *Hungary,* cooling-rate, texture and mineral comp., 69-1547 ; *Iceland,* in complex dyke, geochemistry, 69-2500 ; *Nevada,* anal., 69-2479 ; *New Zealand,* K content and depth of seismicity, 69-1657, magma differentiated, 69-749, magma by crustal fusion, 69-749, petrography, 69-705, petrography, petrochemistry, 69-709 ; *Polynesia,* age, 69-17 ; *St. Kitts,* petrology, anal., 69-724 ; *Siberia,* Nb and Ta in, 69-379 ; *South China Sea,* anal., petrography, 69-1599 ; *Vietnam,* dyke, anal., petrography, 69-3425 ; *Washington,* K-rich, anal., 69-1608

Andesite *(contd.)*
—, basaltic, experimental melting, 69-1218 ; *Nevada,* hydrothermal alteration, 69-1359 ; *USA,* anal., 69-2472
—, garnet-cordierite, *Lipari Is.,* geochemistry of alteration crust, 69-1690
—, hypersthene-augite, *Spain,* petrography, anal., 69-1567
—, leucite, *Italy,* petrography, anal., 69-1574
—, olivine, *Oregon,* jointing and alteration in, 69-2481
—, pyroxene, *Haiti,* spherulitic, K and Ca in, 69-2167
—, tholeiitic, *Australia,* anal., 69-1639
— -basalt, *Kamchatka,* linear parageneses of rock-forming elements, 69-2152 ; *Kuriles,* hydrothermal alteration of, 69-3107
'Andesite' formation, *Andes,* anal., origin, 69-3437
Andhra Pradesh (A.P.) v. India
Andörja Is., Troms v. Norway
Andosoil, *Massif Central,* on volcanic ash, profile, 69-114
Andradite, Sc analogue synthesized, opt., X-ray, 69-308 ; structure, 69-1980 ; synthesis, 69-1209 ; *British Columbia,* Sn in, 69-2260 ; *Ethiopia,* on trachyte, fumarolitic origin, anal., 69-3212 ; *Mysore,* anal., refr. ind., sp. gr., 69-3209 ;
— -grossular, B isomorphism in, 69-3084
Andriamena v. Malagasy Republic
Angel Is., Marin Co. v. California
Angles, Basses-Alpes v. France
Anglesite, IR diffraction, 69-1969 ; structure refined, 69-1075 ; thermal expansion of, 69-2633
Angola, age of rocks, 69-2 ; granite alteration profiles, 69-1010 ; *Bembe,* libethenite, pseudomalachite, 69-873 ; *Benguela–Moçamedes,* volcanic rocks, 69-3408 ; *Mount Bonga* and *Mount Tchivira,* geochemistry and petrology, 69-1591
Angul, Orissa v. India
Angus v. Scotland
Anhydrite, formation in igneous and sedimentary rocks, 69-2082 ; –gypsum transition point, 69-2083 ; IR diffraction, 69-1969 ; solubility in $NaCl-H_2O$, 69-2082 ; *Ireland,* 69-1761 ; *Leicestershire,* 69-1143 ; *Lipari Is.,* in altered volcanic rocks, 69-1678 ; *Moldavian SSR,* S isotopes in, 69-2197 ; *New York,* in dolomite, 69-2682 ; *Spitzbergen,* primary and secondary, 69-1689 ; *Thailand,* 69-2039
Animikie v. North America
Anitápolis, Santa Catarina v. Brazil
Ankaramite, *India,* pyroxenes in, 69-3235 ; *Siberia,* Nb and Ta in, 69-379
Ankaratrite, *Haut-Rhin,* vein in gneiss, 69-655
Ankasimbelo v. Malagasy Republic
Ankerite, Ca-Mn, genesis, anal., X-ray, 69-1517 ; *Congo,* in carbonatites, 69-679 ; *France,* origin, 69-3530 ; *Labrador,* in Fe formation, anal., 69-2279 ; *Oslo,* 69-2973 ; *Quebec,* in Fe formation, anal., 69-2280 ; *Russian SFSR,* in septarian nodules, 69-1322
— marble, *Italy,* anal., genesis, 69-2290
Ankisatra v. Malagasy Republic
Anna Procopi mine, Příbram v. Czechoslovakia
Anorthite, calc. powder pattern, 69-1836 ; electrical conductivity, 69-855, 2652 ; –enstatite reactions, 69-2115 ; equilibrium data, 69-1216 ; –forsterite reactions, 69-2115 ; from pumpellyite, 69-1213 ; production from gel, 69-2045 ; review of paragenesis, 69-3292 ; *Auckland,* in ultramafic nodules, chem., opt., X-ray, 69-3199 ; *West Indies,* sodic, plutonic, anal., X-ray, origin, 69-3292
Anorthoclase, *New Zealand,* in xenolith, anal., 69-710 ; *Siberia,* in pseudoleucite rocks, opt., 69-3400
Anorthosite, in massifs and layered complexes, 69-748 ; magmatic origin, 69-748 ; petrogenetic model for evolution of, 69-746 ; production of alumina from, 69-1155 ; shock-wave equations, 69-2626 ; *Adirondack mts.,* 69-2612 ; *India,* orthopyroxene-bearing, 69-3575 ; *New York,* –charnockite series, anal., 69-3591, anal., petrography, 69-718 ; *Rajasthan,* anal., 69-693 ; *Siberia,* charnockite in pluton, 69-3565
Ansignan, Pyrenees v. France
Antampombato, Moramanga v. Malagasy Republic
Antarctica, K, Th, U anal. in rocks, 69-385 ; nitrate deposits, 69-2553 ; radioactivity of rocks, 69-385 ; *Alexander Island,* camptonite dykes, 69-711 ; *Cape Hallett, Victoria Land,* geology, petrology, 69-712 ; *Clark mts.,* adamellite, age, 69-901 ; *Eights Coast,* quartz diorite, 69-1800 ; *Fosdick mts., Ford ranges,* geology, 69-2487 ; *Enderby Land,* coexisting sapphirine and quartz in granulite, 69-825 ; *Lake Vanda,* O isotopes in sulphates, 69-419 ; *McMurdo Sound,* age-determinations, 69-1799, invasion by Ross Ice Shelf, 69-1799 ; *Marie Byrd Land,* pyroclastics, volcanoes, 69-3478 ; *Pensacola mts.,* magnetism, 69-2662 ; *Queen Maud Land,* anal. of snow and firn, 69-82 ; *Ross Ice Shelf,* 69-1799, mineral comp. and origin of nitrate deposits, 69-411 ; *Ross Is.,* volcanic rocks, 69-2509 ; *Scotia Arc,* K, Th, U anal. in rocks, 69-385, radioactivity, 69-385 ; *Sør Rondane mts., Queen Maud Land,* magnetization, 69-2661 ; *Taylor Valley,* evaporites at ice pool edge, 69-2210 ; *Vestfold hills,* dolerite dyke swarm, age, 69-902
Anthophyllite, study of Mg-Fe solid solutions of Al-free, 69-2110 ; *Colorado,* in gneiss, 69-2608 ; *Labrador,* in Fe formation, anal., opt., unit cell, 69-2279 ; *Massachusetts,* in amphibolite, anal., 69-3253 ; *Ukrainian SSR,* asbestiform, anal., opt., cell parameters, 69-1440, in cordierite rocks, anal., 69-521 ; *USSR,* asbestiform, anal., opt., cell parameters, 69-1440
— –cordierite rocks, *Ukrainian SSR,* petrography, paragenesis, 69-521
Anthracite, *Japan,* in metamorphic rocks, chem., X-ray, 69-2597
Anti-Atlas v. Morocco
Antigorite, Shubnikov group structure, 69-1949 ; *Manitoba,* X-ray, d.t.a., opt., 69-2296 ; *New Zealand,* anal., X-ray, opt., sp.gr., 69-1447 ; *Pennsylvania,* 69-2296 ; *Taiwan,* hydrothermal breakdown, X-ray, d.t.a., anal., 69-1028
Antimonides, Ni-, in meta-gabbros, 69-3331
Antimony, in chondritic meteorites, 69-3184 ; in Fe meteorites, 69-2236 ; sedimentary deposits associated with submarine volcanism, 69-204 ; *Brazil,* native, 69-2003 ; *Collet-de-Dèze,* in veins, 69-205 ; *Nevada,* 69-2226, anomalous concentration, 69-265 ; *Romania,* 69-3390, in ore, 69-1261 ; *Spain,* 69-33 *Taiwan,* in enargite and luzonite, 69-1 *Utah,* distribution, 69-1120
— compounds, *Italy,* sulphosalts, 69-29
— ores, *Alaska,* 69-260 ; *Burma,* flota concentration, 69-2025 ; *Greece,* o and age, 69-204 ; *Istanbul,* origin and 69-204 ; *Massif Central,* two paragen 69-2959 ; *Ontario,* sulphantimon X-ray, 69-1534 ; *Soviet Far East,* 1998 ; *Transbaikal,* sulphantimor reflectivity, comp., X-ray, 69-1533
Antiperthite, *Minnesota,* in gneisses, a origin, 69-3283 ; *New Jersey,* or 69-2605
Antônio dos Santos quadrangle, M Gerais v. Brazil
Antozonite, *Germany,* veins with pi blende, 69-221
Antrim v. Ireland
Anzola v. Italy
Aosta v. Italy
A.P. = Andhra Pradesh
Apatite, Bi in, 69-3223 ; carbonate stitution, X-ray, IR, EM, 69- Fe-bearing, stability, 69-295 ; fis track annealing in, 69-2742 ; IR, 69- in NBS phosphate rock, unit cell, halogens in, 69-3340 ; isotype, 69-23 K-bearing, 69-294 ; lanthanides in, 3070 ; low *T* fluoride-hydroxyl, 69-2 marine, depletion of Ce, 69-3070 ; m element anal., 69-975 ; O-rich, 69-3 origin of physical property differe 69-184 ; Pb, structure, 69-1078 ; substituted for Ca, 69-1198 ; solubili sea-water, 69-1190 ; structure, 69- substitution in, 69-294, 2088 ; unit opt., halogens in, 69-3340 ; *Bohemi* veins, X-ray, anal., F in, opt., 69- *California,* in wood fragments, 69-2 *Canada,* inclusions in, 69-2213 ; *Chil* magnetite ores, 69-2028, intrusive bo 69-2028 ; *England,* in Chalk, 69- *Europe,* in Chalk, 69-109 ; *Flo* precipitated, reworked, 69-2369 ; *Fr* in pegmatite, 69-869, lenses in quart X-ray, 69-2561 ; *India,* in magn ores, 69-2028, intrusive bodies, 69-2 -magnetite deposit, metallogenesis, 2972 ; *Italy,* anal., inclusions in, 69-3 in geode in tuff, 69-3388 ; *Kola penin* inclusions in, genesis, 69-3169, IR, a 69-602 ; *Malagasy Republic,* in intru veins, 69-2043 ; *Maryland,* co-exis with magnetite, rutile and chlorite, a 69-3313 ; *Mexico,* IR, anal., 69- micro-morphology, EM, trace elem in, 69-2370 ; *North America,* in magn ores, 69-2028, intrusive bodies, 69-2 *Ontario,* IR, anal., 69-602, on qu grains, 69-2567 ; *Quebec,* in carbonat 69-716, in lamprophyre, 69-3429 ; *Sp* habit in granite, 69-3502 ; *Sweden* magnetite ores, 69-2028, intrusive bo 69-2028 ; *Texas,* in nodules, X- 69-3510 ; *USSR,* from skarn, e 69-2922, paramagnetic centres in, 2922
— minerals, silicates, synthesis of earth phases, 69-296
Apennines v. Italy
Aplite, free and combined water 69-1890 ; *Antarctica,* petrology, a 69-712 ; *Austria,* Rb in biot 69-1301 ; *Bavaria,* 69-3391 ; *Califo* in dykes, anal., 69-2406 ; *Corn* alkalis and K in, 69-3457 ; *Hung*

ite *(contd.)*
eochemistry, 69-1281 ; *Italy,* garnet-earing, 69-2262 ; *Massif Central,* anal., 9-657
pegmatites, *Spain,* in granites, petro-enesis, 69-1632
itic rocks, *Saskatchewan,* anal., 69-1432
granite, rare element economic poten-al, 69-1290 ; *Mongolia,* mineralogy, nal., 69-2462 ; *Siberia,* dispersion haloes, 9-1390 ; *Transbaikalia,* geochemistry, 9-2172 ; *Urals,* Nb and Ta in, 69-381
phyllite, etch patterns and dislocations, 9-830 ; e.p.r., 69-2647 ; structure, proton nagnetic resonance, 69-2903 ; *Czecho-ovakia,* 69-872 ; *India,* quartz pseudo-norphs of, 69-3621 ; *Poona,* in basalt, nal., X-ray, 69-2303
alachian mts. v. United States
alachians v. United States
nacreptite, *Japan,* structure, anal., t.a., X-ray, IR, 69-149
namarine, *New Hampshire,* 69-1246 ; *Vestern Australia,* localities, 69-1245
itaine basin v. France
ABIA, continental drift, 69-1790 ; *Masirah Is., Oman,* ophiolite complex, 9-3413 ; *Oman mts.,* ophiolites, 69-3412
cena, Huelva v. Spain
gonite, co-precipitation of Sr ions from ea-water, 69-1323 ; precipitation, 69-513 ; precipitation at low *T* and *P,* 9-1187 ; stability and metamorphic ressures, 69-306; *Brazil,* origin in shale, 9-592 ; *Malagasy Republic,* 69-1519 ; *pain,* X-ray, EM, 69-870
l Sea v. USSR
n valley, Pyrénées v. France
achon basin v. Atlantic Ocean
hipel des Pirates v. Vietnam
CTIC, *Heckla Hoek, Spitzbergen,* nomen-lature of metamorphic rocks, 69-626 ; *Spitzbergen,* anhydrite, 69-1689
lèche v. France
lennite, *India,* opt., X-ray, d.t.a., chem., 9-2266
lnamurchan, Argyllshire v. Scotland
ls peninsula, Co. Down v. Ireland
naceous rocks, anal., classification, etrography, 69-1310
nite, *Argentina,* interstitial clay in, X-ray, d.t.a., 69-991
quipa v. Peru
vedsonite, *Labrador,* with aegirine-ugite, chem., opt., 69-527
ientera, Alpes Maritimes v. France
ientat, Corrège v. France
GENTINA, basalt, 69-1755 ; basalt, n.r.m., 9-860 ; sarmientite, 69-2375 ; *Bahia San Blas,* Fe and Ti ore reserves calcu-ated, 69-202 ; *China Muerta, Neuquen,* lay interstitial in arenite, 69-991; *El Pungo, Córdoba,* nepheline basalt, 9-729 ; *Jujuy,* teruggite, 69-2394 ; *La Cueva de La Bruja, Mendoza,* opal, 9-884 ; *La Flecha gorge, San Juan,* natroalunite, natrojarosite, 69-1507 ; *Liquinaste, Jujuy,* ferberite, 69-1084 ; *Neuquén,* volborthite, malachite and arnotite, 69-885 ; *Payun-Matru volcano, Mendoza,* geology, petrology, 69-730 ; *Rio de la Plata,* sediments, 69-3512 ; *San Luis,* beusite, graftonite, lithiophilite, 9-2395 ; *Sierra de Comechingones, Córdoba,* uraniferous pegmatites, 69-117 ; *Sierra de los Cóndores, Córdoba,* basalts, geology, 69-728 ; *Sierra Pampe-anas,* granite, metalliferous deposits, egmatite, volcanism, 69-201 ; *Tanti, Córdoba,* bermanite, 69-605
Argentite, *Ontario,* in Ni-Co-Ag ore, 69-209
Argillaceous rocks, *Yorkshire,* X-ray, comp., 69-2871
Argillite, origin of bauxite, 69-1151 ; *Idaho,* anal., comp., 69-3509 ; *Nevada,* anal., comp., 69-3509 ; *New Jersey,* age, 69-3458 ; *Ontario,* varved, comp., 69-3123 ; *Poland,* 69-1331
Argon, anal. by isotope dilution, 69-1818, 1820 ; determination, 69-23 ; in achondrite meteorites, 69-3179 ; migration in pitchblende and uraninite, 69-1372 ; radiogenic, determination with solid phase ^{15}N, 69-80 ; stability in micas and microcline, 69-452 ; *Caucasus,* in volcanic gases, 69-445 ; *Hawaii,* radiogenic, in inclusions causing anomalous ages, 69-912 ; *Kamchatka,* in volcanic gases, 69-445 ; *Kurile Is.,* in volcanic gases, 69-445
— isotopes, age of groundwater, 69-447 ; in hydrocarbon gases, 69-447, 448 ; in volcanic gases, 69-445 ; origin in mantle, 69-448
Argyllshire v. Scotland
Ariccia v. Italy
Ariège v. France
Ariégite, *New South Wales,* in basic pipes, anal., petrography, 69-3428 ; *Pyrénées,* opaque minerals in, TiO_2 in, 69-648
ARIZONA, Be belt, 69-1140 ; bermantite, 69-605 ; Hg in Navajo Sandstone, 69-3132 ; volcanic rocks, 69-2406 ; *Garnet ridge,* eclogite inclusions, 69-3590 ; *Gila Co.,* U deposits, 69-2890 ; *Meteor Crater,* thermoluminescence, 69-2635 ; *San Carlos,* kaersutite from basalt, 69-523, kaersutite xenocrysts, 69-3432 ; *Santa Rita mts., Santa Cruz Co.,* anomalous metals, 69-2223 ; *Wickenburg,* wickenburgite, 69-1538 ; *Yapavai Co.,* Li-bearing bentonite, 69-1928
ARKANSAS, diagenesis in oolitic limestone, 69-784 ; *Magnet Cove, Hot Spring Co.,* minerals, 69-2683 ; *Montgomery Co.,* wavellite, 69-1079
Arkoses, chem. anal. study, 69-3139
ARMENIAN SSR, *Kafan,* diabase porphyry dykes, 69-3447
Armorica v. France
Arnage, Aberdeenshire v. Scotland
Arran, Bute v. Scotland
Arsenate-belovite *v.* belovite
Arsenic, content of basalt and diabase, 69-2162 ; determination in tungsten ores, 69-1873 ; in bituminous coals, 69-2185 ; in chondritic meteorites, 69-3184 ; in Fe meteorites, 69-2236; refr. ind., dispersion curve, absorption coefficient of native, 69-558 ; *Caucasus,* native in Hg ores, X-ray, 69-2958 ; *Mexico,* in apatite, 69-2370 ; *Nevada,* 69-2226, anomalous concentration, 69-265 ; *Newfoundland,* native, in dykes, 69-1133 ; *Romania,* 69-3390 ; *Soviet Far East,* native, in mercury ore, anal., X-ray, 69-3619 ; *Spain,* 69-3373 ; *Utah,* distribution, 69-1120
— compounds, $AlAsO_4$, isotypic with quartz and cristobalite, 69-2185 ; FeAs, Fe_2As_2, free energy, enthalpy, entropy, 69-3016
— minerals, arsenates, basic, of Mn, 69-2374 ; Ni-arsenides in meta-gabbros, 69-3331 ; *Cyprus,* arsenides of Co and Ni, anal., 69-1531 ; *Czechoslovakia,* Ni-As layer structure, 69-2385 ; *Peru,* sulphides, 69-3349
'Arseniopléite', crystallog., X-ray, var. of caryinite, 69-2374
Arsenoardennite, *India,* opt., X-ray, d.t.a., chem., 69-2266
Arsenoklasite, crystallog., X-ray, 69-2374
Arsenopyrite, free energy, entropy, enthalpy, 69-3016 ; structural stability, 69-1957 ; *Brazil,* 69-2003 ; *France,* conditions of deposition, 69-2965 ; *New South Wales,* in Bi-Mo ores, 69-225 ; *Portugal,* in borehole, 69-2971 ; *Slovakia,* in polymetallic deposit, 69-563
Artifacts, *Pitcairn Is.,* source of, 69-715
Artinite, *New Jersey,* 69-2686 ; *New York,* in serpentine, 69-2686
Asbestos, effect of freezing, 69-841 ; *Alaska,* cross-fibre, 69-3627 ; *Italy,* metal sulphides in deposit, 69-2974 ; *South Africa,* 69-1141
Ascharite, *Ivrea,* anal., chem. formula, d.t.a., X-ray, 69-3337
Ashe Co. v. North Carolina
ASIA, *central,* Au ore, 69-262, volynskite, 69-262, W, 69-2207 ; *Himalayas,* metamorphism, 69-3537 ; *Sea of Japan,* volcanism, 69-2460
Asmaca, Alanya v. Turkey
Asnawi, Gujarat v. India
Aspen mt. v. Wyoming
Asperolite, *USSR,* anal., 69-2302
Assynt, Sutherland v. Scotland
Astrophyllite, compared with niobophyllite, 69-1540
Aswan v. Egypt
Atacama v. Chile
Atacama Desert v. Chile
Atasui v. Kazakh SSR
Atiamuri, North Is., v. New Zealand
ATLANTIC OCEAN, basalts, 69-3104 ; Mn nodules, 69-1319 ; O and H isotopes in, 69-437 ; sediments, 69-3596 ; *Arcachon basin,* organic matter in sediments, 69-394 ; *Barracuda escarpment,* palygorskite, 69-104 ; *Blake plateau,* Tertiary sediments, 69-2551 ; *Brava* and *Fogo, Cape Verde Islands,* carbonatites, 69-3401 ; *Brazilian basin,* volcanic rocks, 69-2508 ; *Brest coast,* montmorillonite and pseudochlorite, 69-538 ; between *Faeroe Is.* and *Hebrides,* sediment transportation, 69-3489 ; *Galicia coast,* glauconite, 69-538 ; *Grande Visière massif,* elements in clay fractions, 69-393 ; *mid-Atlantic ridge,* basalt, 69-864, 1303, greenstone, 69-864, metamorphic rocks, 69-1558, mylonite, 69-864, peridotite, 69-864, volcanism, 69-1558 ; *N.W. Irish coast,* magnetic surveys, 69-865 ; *Sargasso Sea,* sea-water, 69-2200 ; *St. Helena,* alkaline rocks, 69-1588, geochronology of volcanoes, 69-1810, magma chamber, 69-1588 ; *St. Paul's Rocks,* olivine basalt, 69-644 ; *Scotian shelf,* clays, 69-318 ; *Tristan da Cunha.* xenoliths, 69-2447 ; *west of Ogooué delta,* ferruginous sands, 69-538
— — CANARY IS., *Fuerteventura,* plutonic complex, 69-663, recent eruptives, basalt, 69-762 ; *Gomera,* basement complex, 69-1570 ; *Lanzarote,* dolomitization, 69-2513, trachyandesite, 69-2425, volcanic rocks, 69-664 ; *Taburiente, La Palma,* volcanic rocks, 69-761 ; *Tenerife,* basic rocks, 69-1571
— — FAEROE IS., basalts, 69-636, palaeomagnetism and age of lavas, 69-906, volcanic ash in peat, 69-1808

Atoll, *Mururoa*, age, 69-18
Atomic absorption spectrophotometry *v.* spectrophotometry, atomic absorption
Atomic absorption spectroscopy *v.* spectroscopy, atomic absorption
Atomic sizes, new system, 69-2137
Atomization energy, of silicates, 69-135
Attacolite-like mineral, *Sweden*, anal., X-ray, 69-3338
Attapulgite, dehydration diagrams, 69-1904 ; *New Mexico*, 69-1922 ; *Spain*, in clay, properties, 69-100 ; *USA*, in continental shelf sediments, X-ray, 69-2551
Attica v. Greece
Aubiers, Deux-Sevres v. France
Auckland, North Is. v. New Zealand
Auckland Islands v. New Zealand
Aude v. France
Augelite, *California*, structure, 69-186
Augen, *Honshu*, in gneiss, formation of, 69-3282
Augite, *Atlantic Ocean*, in sands, weighted values, 69-3489 ; *India*, and co-existing hornblende in metamorphosed gabbro, 69-3543, in ankaramite, opt., 69-3235 ; *New Zealand*, in volcanic rocks, tr. element anal., 69-3083 ; *Ontario*, in diabase sill, 69-2466 ; *Scotland*, co-existing with bronzite, anal., 69-2274 ; *South Africa*, in kyanite eclogite, anal., 69-2595 ; *Sudbury*, anal., 69-210
Augusta Co. v. Virginia
Aurichalcite, crystallog., X-ray, sp. gr., 69-1523 ; *Maryland*, 69-2680
Aust-Agder v. Norway
AUSTRALIA, age of Ordovician shale, 69-3 ; coal, maceral anal., 69-781 ; gilgai soils, 69-1936 ; Silurian shale, 69-3172 ; weathering of basic rocks, 69-2875 ; wolframite, 69-2925 ; *Australian shield*, granulite terranes, 69-1344 ; *north-western, Cartier furrow*, 69-1792 ; *Simpson desert*, bimodal sandstones, 69-3482
—, NEW SOUTH WALES, age of volcanic rocks, 69-5 ; metamorphism in Tasman geosyncline, 69-2599 ; metamorphism of lavas, 69-2598 ; *Broken Hill*, epidiorite dykes, 69-701, folds affecting orebody, 69-741, inesite, 69-3242, microstructures in metamorphic rocks, 69-743, Pb-Zn ores, 69-240, structural anal. of orebody, 69-742, orebody concordant with schist layering, 69-742 ; *Cooma*, magnesiocummingtonite, 69-3246 ; *Delegate*, inclusions in basic pipes, 69-3428, xenoliths, 69-3138 ; *Little Broken Hill area*, structural anal., 69-741 ; *Mount Kaputar*, K-bentonite, 69-108 ; *New England batholith*, hybrid rocks, 69-1645 ; *Pambula, Whipstick mines*, Bi-Mo ores, 69-225 ; *Pioneer mine, Broken Hill*, sulphide ores, 69-241 ; *Prospect, Sydney*, pumpellyite, 69-2265 ; *Snowy mts.*, leucogranite, 69-745 ; *South mine, Broken Hill*, Ag-Pb ores, Consols type vein, 69-242 ; *Sydney basin*, analcite, 69-786 ; *Tamworth-Barraba*, volcanic greywacke, metamorphosed, 69-779 ; *Tweed*, shield volcano, 69-1639 ; *Wuuluman*, Cu-Mo minerals at granite-hornfels junction, 69-792
—, NORTHERN TERRITORY, *Bulman*, mineral exploration, 69-461 ; *McArthur*, Pb-Zn-Ag ores, 69-239 ; *Tennant Creek*, genesis of porphyry-like rocks, 69-3516 ; *Waimuna Springs*, mineral exploration, 69-461
—, QUEENSLAND, agate localities, 69-336 ; age of granite, 69-6 ; mineralized contact of rhyolite and phyllonite, 69-1106 ; opal localities, 69-336 ; sapphire localities, 69-336 ; university experimental mine, 69-1106 ; *Anakie*, sapphire prospecting methods, 69-337 ; *Cape York*, igneous rocks, 69-2719 ; *Cooktown*, basalts, 69-699 ; *Heron Is., Great Barrier Reef*, carbonate sediments, 69-1314 ; *Meandu Creek*, bentonite, 69-111 ; *Mt. Isa*, copper mineralization, volcanic rocks, 69-700 ; *Mt. Morgan*, breccia pipes, mineralization, 69-256, Cu-Au sulphide ores, 69-257, pebble dyke, 69-255 ; *Tweed*, shield volcano, 69-1639
—, SOUTH AUSTRALIA, *Coorong*, coorongite, 69-2187, 2188, formation of dolomite, 69-416 ; *Flinders ranges*, palaeomagnetism, 69-2663 ; *Giles*, layered ultramafic intrusion, 69-698, Ni, Mn, Fe, Co in laterites, 69-2963 ; subdivision of basic complex, 69-696 ; *Gosse Pile*, rutile and spinel in orthopyroxene, 69-1434 ; *Kangaroo Is.*, magnetism, 69-2663 ; *Mt. Lofty*, pre-tectonic crystallization, 69-2600
—, TASMANIA, basalts, 69-1601 ; chabazite, 69-1601 ; dundasite, 69-1520 ; geology and mineral resources, 69-1995 ; johnstonotite, 69-616 ; baryte, 69-419 ; magnetism, 69-2664 ; volcanic rocks, 69-1601 ; *Aberfoyle*, cassiterite, 69-1479 ; *Cleveland mine*, Sn ores, 69-61 ; *Great Lake*, diabase-granophyre, 69-382, Ni/Co and mafic index in rock series, 69-374 ; *Heemskirk*, plagioclase alteration, 69-1282 ; *King Is.*, hyaloclastite breccias, pillow lavas, 69-3427 ; *Mt. Bischoff*, fluid inclusion studies, 69-2955 ; *Mt. Lyell*, betekhtinite, 69-1498, review of Cu mining, 69-2957 ; *Savage river–Rocky river region*, magnetite deposits, 69-2031
—, VICTORIA, garnets in calc-alkaline rocks, 69-1414 ; *Skipton Caves*, newberyite, 69-182
—, WESTERN AUSTRALIA, age of volcanic rocks, 69-4 ; Au resources, 69-196 ; bauxite resources, 69-196 ; Fe resources, 69-196 ; gemstones, 69-1245 ; localities for precious and semiprecious stones, 69-1245 ; mineral resources, 69-196 ; Ni resources, 69-196 ; stratigraphy of Dale Gorge member, 69-226 ; stylolites, 69-3507 ; *Canning basin*, stylolites in dolomitic limestone, 69-768 ; *Coates*, V-bearing magnetite gabbro, 69-787 ; *Credo, Kalgoorlie*, meteorite, 69-2245 ; *Fenbark, Kalgoorlie*, meteorite, 69-2245 ; *Fraser range*, metagabbro, 69-3587 ; *Great Boulder mine, Kalgoorlie*, calaverite and petzite, Au-krennerite assemblage, 69-261 ; *Hamersley*, banded Fe ore, 69-1095, riebeckite, 69-1095 ; *Jimberlana*, norite, 69-1622 ; *Kununurra area*, Ag-Pb-Au-Cu ores, 69-259 ; *Little Tarraji river, Yampi, West Kimberley*, Cu deposits, 69-211 ; *Marra Mamba, Pilbara*, crocidolite, 69-697 ; *Nallah, Cocklebiddy*, meteorite, 69-2243 ; *Pilbara goldfield, Port Hedland*, beryl and columbite in pegmatite, 69-877 ; *Thaduna mine, Peak Hill goldfield*, Cu lode in fault zone, 69-212 ; *West Kimberley*, pegmatite mined for muscovite, 69-270 ; *Wittenoom–Yampire*, bedded chert, 69-3533
Australian shield v. Australia
Austral Is. v. Pacific Ocean
Australites, large dumbbell, 69-499 ; shape and indochinites, 69-497
AUSTRIA, garnet in skarn, 69-791 ; geochemical prospecting, 69-466 ; gneiss, granite-gneiss, granulite, 69-8 "Schlier" formation, 69-1682 ; *A* metamorphism, 69-814, mineral zo 69-814 ; *Bleiberg*, Zn exploration, 69-4 1392 ; *Buchwald*, garnet replacing sider 69-2937, low chalcopyrite after h 69-2937 ; *Dorfer Keesfleck, Venedi* anatase, brookite, rutile, 69-23 *Eichbüchl*, low chalcopyrite after h 69-2937 ; *Glasbachgraben, Burgenl* Na-amphibole, structure, 69-1 *Gösleswand, Tyrol*, stilpnomelane, 3273 ; *Kaiser Gebirge*, 'wettersteinka 69-2513 ; *Kloech, Styria*, plombier rhodesite, tobermorite, 69-36 *Kublang, Bleiberg*, hydrochemical p pecting, 69-466 ; *Lechtaler Alps, Aust* 'Hauptdolomit', 69-2513 ; *Mitterb Salzburg*, geochemical prospecting, 1392 ; tetrahedrite, 69-1392 ; *Oetz Stubai, Tyrol*, metamorphism, 69-35 *Pitten*, low chalcopyrite after hi 69-2937 ; *Puchegg, Styria*, chrombiot 69-534 ; *St. Leonhard am Horner W* granulite, 69-740 ; *Semmering*, deposits, 69-2937 ; *Sieggraben, Burg land*, Fe ore, pre-Alpine mineralizati 69-1124 ; *Steinbach, Burgenland*, pentinites and chlorite schists, 69-25 *Venedig, Hohe Tauern*, Rb in bioti 69-1301 ; *Wechsel*, ore deposits, 2937 ; *Wegscheid*, halloysite in graph 69-1020 ; *Weitendorf, Steiermark*, s dine, shoshonites, 69-671 ; *Wolfsbach Salzburg*, stilpnomelane, 69-3273 ; *Zil taler Alps, Tyrol*, peristerite, 69-32 tonalite and gneiss, 69-1582
Autunite, identification by γ-ray spectr 69-854 ; *France*, in granite, 69-2 in pegmatite, 69-868, 869
Auzat, Ariège v. France
Aversa v. Italy
Awaruite, *Norway*, in ultrabasic ro anal., paragenesis, 69-1478 ; *Quebec*, serpentinite, 69-1602
Axinite, crystal chemistry, isomorphism nomenclature 69-507 ; Raman spectr 69-3607 ; *Czechoslovakia*, in brecc anal., opt., sp.gr., 69-509 ; *Devon*, skarns, anal., opt., sp.gr., 69-1433
— –manganaxinite isomorphous series, 507
Ax-les-Thermes v. France
Azegour, Haut Atlas v. Morocco
AZERBAIJAN, SSR, clay mineralogy molasse, 69-2869 ; tuffs, 69-3501 ; ult mafic rocks, 69-373 ; *Mrovdag ri Lesser Caucasus*, pumpellyite, 69-3220
Azov v. Ukrainian SSR ; USSR
Azov Sea v. USSR
Azrou-Melloul, High Atlas v. Morocco
Azuaga v. Spain
Azuma mine, Honshu v. Japan
Azurite, *Maryland*, 69-2680 ; *New Jer* 69-2684

Bababudans, Mysore v. India
Babbitt–Embarrass v. Minnesota
Bacteria, produce Fe and Mn ox dendrites, 69-3076 ; *Nevada*, sulph oxidizing, 69-1361
Badajoz v. Spain
Badakhshan v. Afghanistan
Baddeleyite, *Kola peninsula*, in carbonati and associated rocks, anal., X-r 69-572 ; *South Africa*, occurrence reserves, 69-2940
Baden. v. Germany
Baffin Bay v. Canada

a v. Brazil
a San Blas, Buenos Aires v. Argentina
Mare v. Romania
Sprie v. Romania
al, Siberia v. Russian SFSR
California v. Mexico
ngero, Torino v. Italy
issero massif v. Italy
aschite, *Kazakh SSR*, 69-2187
clay, O–H stretching vibrations, IR, -ray, 69-2844
ic Sea v. Europe
ic Shield v. Europe
ible v. Norway
atites, *Romania*, associated metallo- neses, 69-1089
croft, Ontario v. Canada
derkhola v. Nepal
ding, *Cornwall*, in granitic rocks, origin, 9-3457
ffshire v. Scotland
galore, Mysore v. India
tyshevo, Donets basin v. Ukrainian SSR
ão de Cocais, Minas Gerais v. Brazil
bados v. West Indies
berton, Transvaal v. South Africa
bertonite, structure, 69-1061
celonette, Hautes-Alpes, v. France
i v. Italy
ite *v.* Baryte
ium, emission-spectrographic deter- nination, 69-2809 ; in feldspar pheno- rysts and groundmass of volcanic rocks, 9-2153 ; partition coefficients in feld- pars, 69-545 ; salinity indicator in clays, 9-395 ; *Europe*, in Zechstein deposits, 9-415 ; *France*, stratigraphic profile in orehole, 69-1317 ; *New Zealand*, in ugites, hornblendes, hypersthenes, lagioclases, 69-3083 ; *Norway*, in nephe- ne and feldspar, 69-2317 ; *St. Kitts*, in vas, 69-724 ; *Sardinia*, in biotite, 9-1457 ; *Sweden*, in phlogopite, 69-2289 ; *Urals*, Ba/Sr ratio in bituminous shales, 9-3133
compounds, aluminate, structure, 69- 74 ; $BaTiO_3$, dielectric and opt. roperties, 69-2642 ; chloride, structure efined, 69-1075 ; sulphate, solubility in ea-water, 69-426
mer, Rajasthan v. India
racuda escarpment v. Atlantic Ocean
randian area v. Czechoslovakia
ysilite, synthesis, 69-3042
yte, dislocations and etch pits, 69-1961 ; sea-water, 69-3147 ; IR, 69-1969 ; arine and continental origins, 69-2172 ; seudomorphed in sulphide ore, 69-2356 ; olubility, 69-2085 ; Sr and S isotope atios, 69-2173 ; structure refined, 69- 075 ; thermal expansion, 69-2633 ; U, h and Sr in, 69-2173 ; *Cumberland*, eins, 69-2415 ; *Durham*, structure re- ned, 69-1076 ; *England*, O isotope ratio, 9-419 ; *Germany*, 69-2970, 2993 ; *Italy*, 9-2014 ; *Morocco*, karst mineralization, 9-273 ; *Nevada*, bedded deposits, 69- 040 ; *New Mexico*, Ra concentrated in, 9-1813 ; *Ontario*, in carbonatite, 69- 567 ; *Romania*, γ-ray spectrometry, 9-1505 ; *Russian SFSR*, in septarian odules, 69-1322 ; *Saudi Arabia*, jas- eroid in, anal., 69-1137 ; *Tasmania*, O otope ratio, 69-419 ; *USSR*, in Fe ore, nal., opt., X-ray, 69-2355 ; *Westmor- nd*, growth spirals on, 69-2615 ; *Yorkshire*, controls of mineralization, 9-1142
— –celestine series, frequency distribution of compositions in, 69-594
— ores, determination of free SiO_2 in, 69-1855
Bas-Alentejo v. Portugal
Basal Reef, Orange Free State v. South Africa
Basalt, heat capacity, 69-840 ; As content, 69-2162 ; average Au in, 69-3102 ; –eclogite transformation, 69-2115 ; electrolysis, 69-312 ; emplacement of flood flows, 69-3354 ; forms and structures of extrusive and intrusive, 69-630 ; inclusions in as depth indicators, 69-1626 ; lanthanides in Mohole, 69-1627 ; magnetic properties of column, 69-731 ; rare earths in, 69-1303 ; salt from weathering of, 69-2208 ; transformation to quartz eclogite, 69-1218 ; treatise on, 69-630 ; *Alaska*, age, geology, magnetism, 69-2406, interlayered with limestone, Cu in, 69-2948 ; *Antarctica*, anal., 69-712 ; *Argentina*, magnetism, 69-860, anal., age, 69-728, thermomagnetic and X-ray anal., 69-1755 ; *Atlantic Ocean*, lanthanides in, 69-3104 ; *Austria*, anal. 69-671 ; *Brazil*, 69-2486 ; *Canary Is.*, 69-664, recent eruptives 69-762 ; *Easter Is.*, magnetism, 69-862 ; *Ethiopia*, 69-678 ; *France*, CIPW norm, 69-2418, in massif, magnetism, 69-3367, rare earths, 69-70 ; *Germany*, red soil from kaolinized, 69-1934 ; *Hawaii*, submarine, anal., palagonitization, 69-1659 ; *Hungary*, magnetism, 69-2659 ; *Iceland*, complex dyke, geochemistry, 69-2500, magnetism, 69-860, thermomagnetic and X-ray anal. 69-1755 ; *India*, modal anal., 69-692 ; *Italy*, clay minerals from weathering of, 69-2874 ; *Japan*, sub-lake, palagonitization, 69-1659 ; *Kilauea*, deep-sea, anal., 69-1658 ; *Korea*, Cu in, anal., 69-3302 ; *Malagasy Republic*, 69-1593 ; *Mauritania*, in crater, anal., 69-3403 ; *mid-Atlantic ridge*, hydrothermal alteration, 69-864, magnetism, 69-864 ; *Nevada*, anal., 69-2479 ; *New Zealand*, 69-705 ; *Pacific Ocean*, anal., 69-1658, 2485, from seamounts, anal., tr. elements, 69-1607 ; *Polynesia*, age, 69-17 ; *Queensland*, anal., 69-699 ; *Shetland*, age, 69-909 ; *St. Kitts*, anal., 69-724 ; *Siberia*, Nb and Ta distribution, 69-379 ; *Southern Africa*, Sr isotopes, 69-2155 ; *Soviet Far East*, leucite-bearing, 69-686 ; *Tasmania*, anal., 69-1601 ; *USA*, anal., 69-2472, contamination indicators, anal., Pb and Sr isotopes in, 69-2498
—, alkali, tr. elements, origin, 69-1629 ; Zr in, 69-1642 ; *Cocos Is.*, comp., age, magnetism, 69-2452 ; *France*, CIPW norm, 69-2418 ; *Hawaii*, SiO_2 content from refr. ind., 69-2645 ; *Russian SFSR*, chem., genesis, 69-684 ; *Sardinia*, anal. 69-3376 ; *Soviet Far East*, 69-686 ; *Texas*, porphyritic, Sr isotope disequilibrium, 69-3360
—, alkali-olivine, *Germany*, lanthanides and Y in, 69-1304 ; *Uganda*, anal., opt., origin, 69-2496
—, alkalic, classification, 69-628
—, analcite, *Queensland*, anal., 69-699
—, low-K olivine tholeiitic, *mid-Atlantic ridge*, anal., 69-1558
—, nepheline, abandon name, replace with olivine nephelinite, 69-1543 ; *Argentina*, 69-729 ; *Queensland*, anal., 69-699
—, olivine, *Brazil*, 69-2486 ; *Nevada*, magnetic susceptibility and grain density to distinguish types, 69-2407 ; *New Zealand*, 69-703 ; *Rajasthan*, anal., 69-693 ; *St. Paul's Rocks*, comp., 69-644 ; *Sicily*, anal., 69-2427 ; *Texas*, anal., 69-3431
—, pigeonitic, *Sicily*, anal., 69-2427
—, subalkaline, *Russian SFSR*, chem., genesis, 69-684
—, tholeiitic, origin, 69-754 ; primitive magma, 69-1304 ; *Carlsberg ridge*, anal., 69-3397 ; *E. Pacific rise*, rare earths in, 69-1303 ; *mid-Atlantic ridge*, rare earths in, 69-1303 ; *Sicily*, flow and neck, anal., 69-2426
Basaltic rocks, basaltic andesites, 69-630 ; effects of high *P* on, 69-630; geochemistry of, 69-630 ; K/Ar dating, 69-2739 ; mineralogy, petrography, silicate systems related to, 69-630 ; spectrographic anal., 69-1302 ; tr. elements in, 69-630 ; *Germany*, lanthanides and Y in, 69-1304 ; *Iceland*, sorting of phenocrysts, 69-1620 ; *Kilauea*, pumice, effect of gas on, 69-1662 ; *New South Wales*, inclusions in basic pipes, chem., 69-3428 ; *Siberia*, ages, 69-3399 ; *Sweden*, in boreholes, anal., 69-2413 ; *Turkmenian SSR*, alkalic differentiates, comp., 69-2457
Basaluminite, *Kansas*, as debris, anal., X-ray, d.t.a., IR, 69-596 ; *Wales*, in mudstone, d.t.a., refr. ind., paragenesis, 69-2357
Basanite, *France*, breccia in pipes, anal., 69-3524 ; *Italy*, 69-2437
—, nepheline, *Germany*, lanthanides and Y in, 69-1304 ; *Texas*, anal., 69-3431
Base metal ores, sulphides, genesis of concordant deposits, 69-291 ; *Canada*, distribution and continental drift, 69-233 ; *Ireland*, distribution and continental drift, 69-233, Pb-Zn-Ag, anal., 69-234
Basement, *Canary Is.*, 69-1570 ; *England*, relation to mineralization, 69-1100
— rocks, *Aar massif*, structures, 69-1713 ; *France*, 5 stages in evolution of, 69-654 ; *Germany*, age, 69-1804 ; *Ivory Coast*, age, 69-2710 ; *Malawi*, chem., 69-3407 ; *Maryland*, effect on metamorphism, 69-798 ; *Norway*, effect on metamorphism, 69-798 ; *Pyrenees*, effect on metamorphism, 69-798 ; *Russian SFSR*, comp., structure, 69-2453 ; *Spain*, 69-3559, possible Brioverian type, 69-3556 ; *Turkey*, effect on metamorphism, 69-798 ; *Vermont*, effect on metamorphism 69-798 ; *Zambia*, geology, 69-1589, 1590
Basic complex, *Italy*, rock types, petrogenesis, 69-666 ; *Malagasy Republic*, 69-1596
— layered intrusions, *Bushveld ; Rhum ; Skaergaard*, distribution of P, 69-362
— rocks, continental, rare earths in, 69-1303 ; heat of cooling and crystallization, 69-1744 ; K, Th, U by γ-spectrometry, 69-388 ; sulphurization of, 69-1305 ; weathering in humid tropics, 69-2875 ; worldwide review of Cu distribution in, 69-421 ; *Assynt*, origin, 69-1646 ; *Australia*, subdivision in complex, 69-696, weathering, 69-2875 ; *Greenland*, granular, anal., 69-3449 ; *Guinea*, weathering, 69-2875 ; *Pacific Ocean*, weathering, 69-2875 ; *Tenerife*, 69-1571 ; *Turkey*, 69-2495 ; *Ural mts.*, eclogitization, 69-817 ; *Vietnam*, weathering, 69-2875
Bass Lake quadrangle, Mariposa Co. v. California
Basses Pyrénées v. France

Bastnäsite, *Colorado,* in carbonate veins, 69-1778 ; *New Mexico,* 69-2480
— —vaterite series, structure, 69-2918
Basutoland v. Lesotho
Batchia, Tripura v. India
Batholith, *Alaska,* age, 69-1812 ; *California,* Ta in, 69-1263 ; *Idaho,* modal comp., 69-2474
Baumhauerite, structure, 69-167 ; *Lengenbach,* 69-2352 ; *Ontario,* antimonian, anal., X-ray, 69-2384 ; *Peru,* crystalline, anal., opt., X-ray, 69-3349
Bauxite, association with argillite, 69-1151 ; origin with reef-building and volcanism, 69-2526 ; *Appalachians,* terra rossa origin, 69-2194 ; *Ariège,* siderite in, anal., X-ray, IR, 69-3495 ; *Brazil,* resources, 69-2946 ; *Cameroon,* halloysite and sepiolite in, 69-2861 ; *France,* 69-773, contact with carbonate rock, anal., d.t.a., t.g.a., X-ray, 69-1149, from glauconitic marl, 69-3517, nickel hydroxide in, 69-586, origin, 69-1932, pisolitic in limestone, comp., genesis, 69-2516, sedimentary origin, 69-1150 ; *Germany,* nodules in red soil, 69-1934 ; *Goa,* 69-1123 ; *Greece,* genesis, tr. elements, 69-2192 ; *Kashmir,* anal., 69-1931 ; *Poland,* formation, anal., 69-1331 ; *Siberian platform,* kimberlites as origin, 69-1935 ; *Turkey,* corundum in, 69-3528, Fe distribution, anal., t.g.a., X-ray, 69-774 ; *Western Australia,* development of resources, 69-196
Bavaria v. Germany
Bavenite, *Italy,* pseudomorphous after beryl, anal., IR, 69-1764 ; *Norway,* in biotite granite, 69-1758
Baveno, Lago Maggiore v. Italy
Bay of Bengal v. Pakistan
Bayerischen Wald v. Germany
Bayerite, *T* and intensity of OH vibration bands, 69-2885
Baymakliya v. Moldavian SSR
Bazavluck structure v. Ukrainian SSR
Bazzite, 69-307 ; *Kazakh SSR,* in pegmatite, anal., opt., X-ray, 69-3222
Beaver Co. v. Utah
Beckelite, 69-296
Bedarieux, Hérault v. France
Beheloka v. Malagasy Republic
Beidellite, from albite, 69-3050 ; hydroxyl absorption bands, IR, 69-2825
Belgian basin v. Belgium
Belgium, *Aardebrug,* non-marine glauconitic illite, 69-2864 ; *Belgian basin,* palaeoecology, O and C isotopes in lamellibranchs, 69-1338 ; *Richelle,* koninckite, 69-1515
Belhelvie, Aberdeenshire v. Scotland
Bell creek v. Montana
Belorussian SSR, *Minsk,* potash mine, 69-2038
Belovite, nature of H_2O in, 69-1083
Bembe v. Angola
Bementite–greenalite series, *Japan,* 69-1096
Benato mine v. Malagasy Republic
Benguela v. Angola
Benitoite, Raman spectrum, 69-3607
Ben Nevis, Inverness-shire v. Scotland
Bentonite, competitive adsorption isotherms, divalent organic cations, 69-96 ; effect of Fe films on exchange capacity, 69-2181 ; interaction with surface active compounds, 69-2840 ; *Alberta,* mineralogy and chem., XRF, X-ray, 69-1007 ; *Arizona,* Li-bearing, 69-1928 ; *Italy,* interbedded with clay, X-ray, c.e.c., d.t.a., 69-2866 ; *Poland,* in dolomite, anal., d.t.a., t.g.a., X-ray, 69-1006 ; *Quebec,* anal., X-ray, 69-1943 ; *Queensland,* origin, anal., Nb, Zr, Y in, 69-111; *Rajasthan,* geology of deposits, 69-110 ; *Romania,* pegmatitic origin, d.t.a., X-ray, 69-1005 ; *Spain,* formation of, jarosite in, 69-598 ; *USA,* Cd in, 69-2177 ; *Utah,* montmorillonite-free deposit, 69-1926 ; *Wyoming,* adsorbed water, IR, 69-1915
—, K-, *Derbyshire,* X-ray, 69-1927 ; *New South Wales,* anal., d.t.a., EM, X-ray, 69-108 ; *Staffordshire,* X-ray, 69-1927
Belozerka v. Russian SFSR
Beraunite, Raman spectrum, 69-3607 ; *Elba,* in Fe deposit, anal., opt., sp.gr., 69-1516 ; *Florida,* in nodules, 69-2674
Berbankite *v.* burbankite
Berbenno, Sondrio v. Italy
Berborite, synthesised, 69-1071
Berda river v. Ukrainian SSR
Beregovo v. Ukrainian SFSR
Beresov v. Berezovsk
Berezovsk v. USSR
Bergamo Alps v. Italy
Bergell Alps v. Switzerland
Bergisch- Gladbach v. Germany
Bergmannssegen, Hanover v. Germany
Bermanite, *Argentina,* in pegmatite, origin, X-ray, 69-605 ; *Arizona,* anal., opt., d.t.a., X-ray, 69-605
Berne quadrangle, Black hills v. South Dakota
Berthierine, *Atlantic Ocean,* with glauconite in green sands, 69-537
Berthierite, Mössbauer spectra of ^{57}Fe, 69-1037 ; *Bavaria, d*-values, 69-2670 ; *Massif Central,* 69-2959
Bertrandite, *USSR,* in metasomatites, 69-1139
Beryl, absorption spectra, 69-513 ; indium-, synthesis, 69-2104 ; Raman spectrum, 69-3607 ; removal of fluorite from, 69-1863 ; structure of synthetic hydrous and anhydrous, 69-138 ; *Bavaria,* 69-3391 ; *Brazil,* in pegmatite, 69-2271 ; *California,* 69-3069 ; *Colombia,* inclusions in emeralds, 69-3064 ; *France,* in pegmatite, 69-869, in pegmatite, anal., refr. ind., 69-3228 ; *Italy,* bavenite pseudomorphs of, 69-1764 ; *New Hampshire,* cat's-eye, 69-1246 ; *North Carolina,* 69-880 ; *Rhodesia,* in pegmatites, 69-2989 ; *Rwanda,* mined, 69-2953 ; *Saskatchewan,* anal., sp.gr., refr. ind., X-ray, 69-1432 ; *Siberia,* in gneiss, 69-607 ; *South Africa,* occurrence and reserves, 69-2940 ; *Utah,* origin of red colour, X-ray, 69-512 ; *Western Australia,* in pegmatite, 69-877, localities, 69-1245
Beryllium, anal. by γ activation, 69-1889 ; correlation with ash in coal, 69-404 ; distribution in igneous rocks, 69-2157 ; *Arizona,* 69-1140 ; *Colorado,* in greisen, 69-1263 ; *Italy,* in alkali-potassic volcanoes, 69-3461 ; *Morocco,* in metamorphosed limestone, 69-199 ; *Nevada,* 69-1140 ; *New Mexico,* 69-1140 ; *New Zealand,* in breccia, 69-354 ; *Siberia,* in intrusive rocks, 69-360 ; *Tien-Shan,* Be: F correlation in syenites, distribution in intrusive rocks, 69-361 ; *Transbaikalia,* in granitic rocks, 69-2172 ; *USSR,* in granitoids, 69-1284, mineralization, metasomatic zonation, 69-1139 ; *USA,* and F in volcanic glasses, 69-2159 ; *Utah,* 69-1140, with F in mineralized tuff, 69-2158, with Li in rhyolitic tuff, 69-2156 ; *Virginia,* in Sn deposits, 69-21 *Wyoming,* in U deposits, 69-1269
— compounds, $Be_2BO_3OH.H_2O$, synth and structure, 69-1071
Beryllometer, 69-199
Berzelianite, *Czechoslovakia,* 69-871
Bessines, Haute Vienne v. France
Betafite, metamict, identification by γ spectrum 69-854
Betekhtinite, *Tasmania,* in galena, co thermal stability, 69-1498
Betic cordillera v. Spain
Bet-Pak-Dala v. Kazakh SSR
Beudantite, *Transbaikal,* from decom sition of tourmaline, 69-511
Beusite, analogue of graftonite, 69-23 *Argentina,* in pegmatite, anal., o X-ray, 69-2395
Bezep, Greater Caucasus v. USSR
Bheraghat, Jabalpur v. India
Bialite, discredited, is wavellite, 69-237
Bicesse-Casal do Clérigo v. Portugal
Bicroft mine, Ontario v. Canada
Biellese v. Italy
Big Bend National Park v. Texas
Big creek v. Idaho
Big creek quadrangle v. Idaho
Bihar v. India
Bikitaite, *North Carolina,* near ideal co opt., anal., unit cell, 69-555
Bilinite, IR, 69-2637
Billingsleyite, *Utah,* new mineral, a formula, *D,* H., X-ray, 69-2383
Bilstein v. France
Bindheimite, *Massif Central,* 69-2959
Binn valley v. Switzerland
Binna valley v. Switzerland
Binnental, Wallis v. Switzerland
Binnite, structure, 69-167 ; *Lengenb* anal., 69-2352
Biogeochemistry, *British Columbia,* of 69-3166; *Northern Territory,* in min exploration, 69-461
Biosphere, evolution of oxidation functi 69-346
Biostratigraphy, *Siberia,* of volcanic for tions, 69-3475
Biotite, age antiquated by K loss, 69-27 age by Ar/Ar method, 69-24 ; caus absorption bands, 69-1033 ; competi adsorption isotherms, divalent org cations, 69-96 ; comp. in gnei granites and redwitzites, anal., 69-32 comp. in igneous and metamorp metasomatic rocks, 69-1631 ; dehydr lation, rehydroxylation, oxidation, re tion, IR, 69-3053 ; frequency distribu of element concentration in, 69-30 hydroxyl absorption bands, IR, 69-28 in biotite-muscovite granite, high Sn Zn in, 69-3269 ; inclusions in qua 69-2448 ; in granites, guide to or 69-1631 ; magnetic moment of F 69-858 ; in metapelites, structural for lae, 69-3268 ; non-ideal crystals, X- 69-146 ; opt. absorption spe structure, colour, pleochroism, 69-19 Sn distribution, 69-377 ; stages decrepitation, anal., 69-1449 ; U fis tracks in, 69-1822 ; X-ray, 69- *Alps,* comp. and lattice parame 69-3270 ; *Andhra Pradesh,* chlorine anal., 69-3248, crystallization *T,* a 69-3266 ; *Angola,* age, 69-2, altera phases, 69-1010 ; *Antarctica,* in mellite, age, 69-901 ; *Aquitaine,* 69-1 ; *Austria,* Rb in, 69-1301 ; *Aust Alps,* post-deformational crystalliza 69-814 ; *Ben Nevis,* anal., 69-6

ite *(contd.)*
ittany, relation with sillimanite in
eisses, 69-2578 ; *California,* crystall-
tion in granitic rocks, anal., 69-3265,
e, in augen gneiss, 69-913, Ta in
existing hornblende, 69-2163 ; *Canada,*
al., ages, XRF, X-ray, opt., sp.gr.,
.a., t.g.a., magnetic susceptibilities,
lymorphism, paragenesis, 69-532 ;
ucasus, Nb/Ta in granitic rocks, 69-383;
rnwall, weathering of, Mössbauer,
-ray, anal., 69-2295 ; *Czechoslovakia,* in
assif, anal., 69-2275 ; *Finland,* in mig-
atites, O isotope ratios, 69-1295; *France,*
granite, anal., 69-2416 ; *Georgian SSR,*
b/Ta in granitic rocks, 69-383 ; *Honshu,*
hornfels, anal., 69-2563 ; *Hungary,*
granites, tr. elements, 69-1288, low
kali, in alkali granite, 69-3267 ; *Inver-*
ss-shire, in metamorphosed syenite,
al., 69-1708 ; *Italy,* age, 69-11, 13,
teration in granitoid rocks, 69-2557,
apatite, 69-3339, Rb and K in, 69-1293 ;
ory Coast, from altered granites, IR,
-ray, 69-2877 ; *Japan,* products of
eathering, X-ray, anal., sp.gr., 69-2294 ;
Carelia, accumulations, 69-3463 ;
abrador, in schist, anal., 69-2279 ;
Massif Central, in granitic rocks, anal.,
pectrography, 69-657; *Minnesota,* comp.
gneiss, 69-2613 ; *Morocco,* age, 69-1798 ;
New Zealand, in gneiss, opt., anal.,
hysical data, 69-284 ; *Norway,* age,
9-16 ; *Ontario,* Ti in, 69-1723 ; *Sardinia,*
granite, opt., X-ray, 69-1640, in
ranites, Ba, Rb, Li and K in, 69-1457,
granites, chem., opt., X-ray, 69-1456 ;
iberia, in granitoids, anal., 69-3264 ;
kye, anal., 69-1706 ; *South Africa,*
granite, in equilibrium with K-
ldspars, 69-3358 ; *Styria,* brown, with
·04% Cr_2O_3, 69-534 ; *Sweden,* Ti and
In in coexisting hornblende and, 69-
154 ; *Tahiti,* anal., opt., 69-2406 ;
Transbaikalia, F variation in alkalic
ocks, 69-357 ; *Tuscany,* in ignimbrite
ith biotite, Na, K and Rb in, 69-2291 ;
Ukrainian SSR, Fe oxidation of, anal.,
9-1460, in schists and gneisses, anal.,
ell size, isomorphous substitution in,
9-1459, Li-bearing, from contact zone,
9-1458 ; *USA,* Mn in, 69-1294
ch creek v. California
ch Portage, Saskatchewan v. Canada
efringence, change with angle of inci-
ence, formula for, 69-921
nessite, *France,* 69-2985 ; *Soviet Far*
ast, around thermal spring, 69-1364
chofite, reasons for occurrence in potass-
um sulphate deposits, 69-1325
allitization, 69-1328
moclite, *Brazil,* in pegmatite, X-ray,
p. gr., H., opt., d.t.a., 69-1487
muth, determination in altered rocks
y atomic absorption, 69-1878 ; in
llanite, apatite, euxenite, fergusonite,
adolinite, monazite, 69-3223 ; *Czecho-*
lovakia, native chemico-structural study,
9-557 ; *Nevada,* 69-265 ; *New South*
Wales, 69-225 ; *Ontario,* native in ore
omplex, 69-209 ; *Romania,* in ore,
9-1261 ; *Utah,* distribution, 69-1120
compounds, artificial subtelluride, 69-
026 ; oxide as spectrographic internal
tandard, 69-971 ; *Central Asia,* tellurides
n Au ore, 69-262
minerals, *Siberia,* Bi_2Te_5 in ore, H.,
eflectivity, anal., X-ray, 69-612 ; *Swit-*
erland, sulphosalt on galena, 69-3617
— ores, *Alaska,* 69-2977 ; *Soviet Central*
Asia, 69-223
— -Cu ores, *Uzbek SSR,* mineral assemblage,
paragenesis, 69-224, native Au, krenner-
ite, calaverite in, 69-263
— -Mo ores, *New South Wales,* in pipes
in roof zone of granite intrusion, 69-225
Bismuthinite, determination of optical
props., 69-3327 ; microanal., 69-2350 ;
France, 69-2979 ; *New South Wales,*
69-225 ; *Utah,* 69-2019 ; *Uzbek SSR,*
69-224
Bismutite, *Brazil,* is bismoclite, X-ray,
sp.gr., H., opt., d.t.a., 69-1487 ; *France,*
Se in, 69-2979 ; *Mozambique,* in pegma-
tite, X-ray, 69-874, anal., d.t.a., X-ray,
69-3333
Bitumen, *Florida,* in recent sediments,
69-3128 ; *Pacific Ocean,* in sediments,
69-1312 ; *Siberia,* in concretions in
shales, 69-1312 ; *Tadzhik SSR,* in
granitoids, 69-2169
Bixbyite, equilibrium with rhodochrosite,
69-3031
Blackbrook, Leicestershire v. England
Black Forest v. Germany
Black Hills v. South Dakota ; Wyoming
Black mt., Seward peninsula v. Alaska
Black Sea v. Europe ; USSR
Blake Plateau v. Atlantic Ocean
Blastomylonite, *Russian SFSR,* hematite
ore, 69-2032
Bleaching earths, book, 69-987
Bleiberg v. Austria
Blende *v.* sphalerite
Blödite, *New Mexico,* in evaporite, anal.,
opt., t.g.a., sp.gr., X-ray, 69-1508 ;
Ross Ice Shelf, in soils, 69-411
Bloedite *v.* blödite
Bloemfontein, Orange Free State v. South
Africa
Blue john v. fluorite
Blue ridge v. Virginia
Blueschist, *Oregon,* lawsonite, 69-3594
Blyava, Urals v. Russian SFSR
Blyberg v. Sweden
Bodie hills, Mono Co. v. California
Boehmite, from leaching of aluminosilicate
gels, 69-3038 ; synthesis, 69-290 ; *T*
and intensity of OH vibration bands,
69-2885 ; *France,* in bauxite, t.g.a.,
d.t.a., X-ray, IR, 69-2516
— bauxite, anal., d.t.a., t.g.a., opt., X-ray,
EM, electrical conductivity, 69-588
Bohdanowiczyte, *Poland,* in ores, anal.,
X-ray, 69-1529
Bohemia v. Czechoslavokia
Bohemian massif v. Czechoslovakia ; Europe
Bohutín, Bohemia v. Czechoslovakia
Bokaro, Bihar v. India
Bokkos, Jos Plateau v. Nigeria
Bokovoy range, Dagestan v. Russian SFSR
Bolivia, sodalite, structure refinement,
69-157 ; *Colquechaca,* hocartite, 69-611 ;
Hocaya, hocartite, 69-611 ; *San Cristobal,*
Villa Martin, Potosi, Ag-bearing deposits,
69-2961 ; *Tacama,* hocartite, 69-611 ;
Villa Apacheta, hexastannite, mawsonite,
rhodostannite, stannite, 69-1530
Bol'shoy Taskyl, Siberia v. Russian SFSR
Bolzano v. Italy
Bonascre v. France
Bone, fossil, comp., IR, X-ray, 69-603
Bonneville Salt Flats v. Utah
Bono- Bitti- Torpè region, Sardinia v. Italy
Borates, Mg and Mn, nomenclature,
69-3337 ; Sn in Mg-Fe, Mössbauer
spectroscopy, 69-1040 ; structure of RE,
69-2918
Borax, stability field, 69-2094 ; *California,*
69-1898
Borisovsk, Urals v. Russian SFSR
Bornholm v. Denmark
Bornite, bonding properties of S in,
69-1955 ; electric and magnetic properties,
69-2651 ; Mössbauer spectra of ^{57}Fe,
69-1037 ; solubility of Ge in, 69-3024 ;
structure, 69-1956 ; *France,* 69-2979 ;
Maryland, 69-2680 ; *Oslo,* 69-2973 ;
Transvaal, in breccia pipes, 69-214 ;
USSR, Re and Mo content, 69-405
Boron, determination, 69-51, 1851 ; deter-
mination in H_2O by particle track
etching, 69-958 ; in carbonaceous schists,
69-1345 ; isomorphism in pyroxenes,
69-1438 ; isomorphism in silicates, 69-
3084 ; isotope separation, 69-1159 ;
salinity indicator in clays, 69-395 ;
France, in shales, 69-407, stratigraphical
profile in borehole, 69-1317 ; *Naples,* in
volcanic products, 69-3109 ; *Russian*
platform, in glauconite, 69-2292 ; *Sicily,*
in evaporites, 69-3115 ; *Tien-Shan,* in
volcanic rocks, 69-367 ; *Tunisia,* in
marls and limestones, 69-3117 ; *Utah,*
69-1120
Börzsöny mts. v. Hungary
Bosahan quarry, Cornwall v. England
Bosnia v. Yugoslavia
Bouches du Rhône v. France
Boulangerite, diagnostic features, 69-3330 ;
Brazil, 69-2003 ; *Massif Central,* 69-2959 ;
Ontario, loop and spiral shaped crystals,
69-882 ; *Rajasthan,* in core sample,
anal., reflectivity, X-ray, 69-570
Boulder v. Colorado ; Montana
Boulder-clay, *Poland,* heavy minerals in,
69-775
Boulder Co. v. Colorado
Bournonite, nuclear quadrupole resonance
in, structure, 69-168 ; *Brazil,* 69-2003 ;
Massif Central, 69-2959 ; *Portugal,* in
borehole, 69-2971
Braitschite, *Utah,* in anhydrite rock, X-ray,
anal., sp.gr., opt., 69-615
Branchville v. Connecticut
Brandholz-Goldkronach, Bavaria v. Germany
Brannerite, isotypic with $NaVMoO_6$, 69-
1068 ; *Orange Free State,* causes blasting
haloes, 69-3438
Bras de la Plaine, Reunion Is. v. Indian
Ocean
Bras D'or Lake, Nova Scotia v. Canada
Brava, Cape Verde Is. v. Atlantic Ocean
Bravoite, *Spain,* in Cu, Ni, Co ores, reflec-
tivity, VHN, 69-2343
Brazil, diamond dredge, 69-331 ; diamond
mining, 69-330 ; magnetite, 69-3599 ;
Amazon River, organic and inorganic
contents, 69-432 ; *Anitápolis, Santa*
Catarina, alkaline rocks, 69-726 ; *Antônio*
dos Santos quadrangle, Minas Gerais,
geology and ore deposits, 69-2946 ; *Bahia,*
carbonado, 69-3305, jacobsite, 69-576 ;
Barão de Cocais, Minas Gerais, Fe, Au,
Mn ores, 69-2027 ; *Caraiba, Bahia,* copper
deposit, 69-1265 ; *Carmópolis,* aragonite
in well cores, 69-592 ; *Conceição do Rio*
Acima quadrangle, Minas Gerais, geology
and ore deposits, 69-2946 ; *Diamantina*
district, diamond mining, 69-332 ; *En-*
cruzilhada do Sul, Rio Grande do Sul,
beryl-columbite pegmatite, 69-2271 ;
Gongo Sôco quadrangle, Minas Gerais,
geology and ore deposits, 69-2946 ; *Minas*
Gerais, Au in hematite ore, 69-227,
hematite ore, itabirite source and host,
69-227 ; *Morro do Niquel, Minas Gerais,*

Brazil *(contd.)*
Ni ore, 69-208 ; *Pedro Lavrada, Paraiba,* bismoclite, bismutite, 69-1487 ; *Quadrilátero Ferrífero, Minas Gerais,* pelites, 69-2178 ; *Rio Ribeira de Iguapé,* sulphide ores, 69-2003 ; *Rio Grande do Sul,* lamboanite, 69-2614 ; *Rondónia,* cassiterite, cinnabar, ilmenite, manganese minerals, zircon, 69-1114 ; *Salvador, Bahia,* sapphirine, 69-883 ; *Sao Gabriel, Rio Grande do Sul,* basic-ultrabasic complexes, 69-2486 ; *Sao Lourenço,* Sn, subvolcanic complex, 69-727 ; *Serra do Curral, Minas Gerais,* Fe ores, resources and origin, 69-228 ; *Tacuaral-Itinga, Minas Gerais,* Li muscovite, 69-2287
Brazilian basin v. Atlantic Ocean
Breccia, *Brazil,* rhyolite, in subvolcanic complex, 69-727 ; *Cornwall,* igneous, mineralogy of, 69-641 ; *Czechoslovakia,* basement xenoliths in, 69-673 ; *Portugal,* tectonic, 69-2582 ; *Scotland,* 69-1671 ; *South Dakota,* solution, 69-2540 ; *Tasmania,* picritic hyaloclasite, 69-3427 ; *Wyoming,* solution, 69-2540
— pipes, *New South Wales,* xenoliths in, 69-3138 ; *Queensland,* mineralization, 69-256 ; *Scotland,* formation of, 69-1562
Bressanone v. Italy.
Breunnerite, *Switzerland,* in steatite, 69-2590
Brézouard v. France
Brine, subsurface, formation, 69-1360 ; *California,* carbonate anal., 69-1868 ; *England,* as source of Pb-Zn mineralization, 69-1143 ; *Oregon,* carbonate anal., 69-1868 ; *Utah,* ion activity products, 69-1358
Brioude-Massiac, Massif Central v. France
'Bristol diamonds', mode of origin, 69-1781
Britholite, 69-296 ; *Siberia,* 69-876
British Columbia v. Canada
British Isles, Caledonian granites, 69-3094 ; shales, mudstones, foundation characteristics, 69-838 ; *v.* also *England, Ireland, Scotland, Wales*
Brittany v. France
Brno v. Czechoslovakia
Broach, Gujarat v. India
Brocken v. Germany
Broken Hill, New South Wales v. Australia
Bromides, solubility, 69-1360
Bromine, determination by XRF, 69-2802 ; in brines, 69-1360 ; *Sicily,* in evaporites, 69-3115
Bromoform, in mineral separations, recovery, 69-928
Bronzite, *Bushveld,* anal., trend in magma, 69-3232 ; *Massachusetts,* gem, 69-1246 ; *Scotland,* coexisting with augite, anal., 69-2274
Bronzitite, shock-wave equations, 69-2626
Brookite, *P–T* studies, 69-2064 ; *Austria,* with anatase and rutile, paragenesis, 69-2330
Brooks range v. Alaska
Brookville v. New Jersey
Brosso, Ivrea v. Italy
Browns canyon, Chaffee Co. v. Colorado
Brucite, hot pressing of, 69-280 ; neutron diffraction data, 69-1964 ; silicification, 69-3041 ; *T* and intensity of OH vibration bands, 69-2885 ; *France,* origin, 69-3530
Brugend mine v. France
Buchanan massif v. Texas
Buchwald v. Austria
Buenos Aires v. Argentina
Buerger algorithm, to obtain Delaunay reduced cell, 69-120
Bug basin v. Ukrainian SSR
Bukhara v. Uzbek SSR
Bukusu v. Uganda
Bulgaria, *Seven Lakes, Rila mts.,* ferrospinels, 69-3312 ; *Sredna Gora,* topaz after feldspar in quartzites, 69-506 ; *Zapachitsa, Stara-Planina,* ore-deposit, strashmirite, 69-1541
Buller Gorge, South Is. v. New Zealand
Bulman, Northern Territory v. Australia
Buranga v. Rwanda
Burbankite, structure, 69-2919
Burein, Akishma-Niman interfluve v. Russian SFSR
Burgenland v. Austria
Burg hills v. Germany
Burgin mine, East Tintic v. Utah
Burma, *Chindwin river,* heavy minerals in sediments, 69-2533; *Kawthulay,* Sb ore concentration, 69-2025 ; *Shweminbon, Shan,* ore minerals, gold, 69-2018
Busachi, Sardinia v. Italy
Bushveld, Transvaal v. South Africa
Busoro mine, S.E. of Lake Kivu v. Rwanda
Bustamite, opt. absorption spectrum, 69-1985 ; *Italy,* in manganiferous rocks, anal., 69-1446 ; *New Jersey,* 69-2679
Buta, Carpathians v. Romania
Butane, adsorption by clay minerals, 69-40 ; *Caucasus,* isomers in natural gas, 69-3158
Bute v. Scotland
Bütschliite, Ontario, 69-1773
Byron v. Maine
Bytownite, calc. powder pattern, 69-1836 ; *Black Forest,* in anorthosite, unmixing in, 69-3290 ; *Bushveld,* in anorthosite, unmixing in, 69-3290 ; *Greenland,* in dyke, anal., opt., X-ray, 69-3291; *Ivrea zone,* unmixing in, 69-3290 ; *Minnesota,* in anorthosite, unmixing in, 69-3290 ; *Norway,* in anorthosite, unmixing in, 69-3290 ; *Outer Hebrides,* in anorthosite, unmixing in, 69-3290 ;

Caballo mts., Sierra Co. v. New Mexico
Cabo de Gata v. Spain
Cabo Ortegal v. Spain
Caceres v. Spain
Cacoclasite, name unjustified, comp., 69-1417
Cacoxenite, IR, 69-2638 ; *Florida,* in nodules, 69-2674
Cadmium, bacterial leaching from sulphide ores, 69-2141 ; determination by atomic absorption, 69-2789 ; in chondrites, 69-2235 ; ion exchange separation, 69, 1852 ; spectrophotometric determination, 69-1852 ; *Nevada,* anomalous concentration, 69-265 ; *USA,* in bentonite, shale, claystone, marlstone, 69-2177, in sphalerite, 69-2339 ; *Vietnam,* in Pb-Zn ores, 69-237
— compounds, $Na_4ZnCd[Si_2O_6]_2$, structure, comp., 69-1983
Cadore v. Italy
Caesium, determination in rocks, 69-2788 ; determination in stony meteorites, 69-967 ; neutron activation, anal., 69-2805 ; partition coefficients in feldspars, 69-545 ; sorption on glauconite, 69-2190 ; spectrographic determination in tektites, 69-1886 ; *America,* in rivers and marine sediments, 69-1354 ; *Norway,* in nepheline and feldspar, 69-2317 ; *Pennsylvania,* variation in diabase-granophyre, 69-382 ; *South-West Africa,* in granites, 69-1636 ; *Tasmania,* variation in diab
granophyre, 69-382 ; *Tien-Shan,* volcanic rocks, 69-367; *Transbaikali* granitic rocks, 69-2172 ; *Ukranian S* in salt deposits, 69-412
— isotopes, *Colorado,* in river sedime 69-3130 ; *Tennessee,* sorption by il 69-398
Cagliari, Sardinia v. Italy
Cagliari Gulf v. Mediterranean Sea
Cahnite, *Siberia,* in skarn, anal., d.t.a., ray, sp.gr., 69-2347
Cairnsmore of Fleet, Kirkudbrightshir Scotland
Calaverite, *Colorado,* 69-2957 ; *Uzbek S* in Cu-Bi ores, 69-263 ; *Western Austr* 69-261
Calc-alkaline rocks, almandine in, elements, 69-2168 ; origin, 69-754 ; o in mantle, 69-1218 ; *New Zeal* petrography, 69-705
Calcarenites, *Italy,* recent, anal., X- 69-3498
Calcareous rocks, *Chile,* intercalated volcanics, microfacies of, 69-3511
Calciochondrodite, in system CaO-S CO_2-H_2O, 69-3045
Calcioferrite, anal., X-ray, 69-3338
Calcite, aqueous solubility, 69-297 ; C O isotopes, 69-3091 ; free energy formation, 69-297 ; high-Mg, preci tion at low *T* and *P*, 69-1187 ; in sulp ore, pseudomorphing baryte, 69-23 low-Mg, precipitation at low *T* and 69-1187 ; precipitation from sea-w 69-1323 ; *P* dependence of IR abs tion, 69-2073 ; stability relations siderite, 69-1192 ; surface area of gr 69-1731 ; transformation rate, 69-15 ultrasonic study of phase transit 69-1162 ; *California,* in evaporites, 1324 ; *Czechoslovakia,* in veins, a 69-590 ; *Germany,* 69-2993 ; *Ka SSR,* pink in metamorphic limest e.p.r., 69-853 ; *Labrador,* in Fe for tion, anal., 69-2279 ; *Malagasy Repu* 69-1519 ; *New York,* in dolomite, 2682, rhombohedral in conglome 69-2688 ; *North Carolina,* on du 69-2681 ; *Norway,* from sövite, Mg 69-3361 ; *Pennsylvania,* fluorescent, 2689 ; *Prague,* lublinite, var., 69-5 *Quebec,* in Fe formation, anal., 69-2 localities, 69-2673, ovoids in lam phyre, 69-3429 ; *Russian SFSR,* septarian nodules, 69-1322 ; *USA* continental shelf sediments, X-ray, 2551
Calcium, colorimetric determination silicates, 69-1857 ; determination, 57 ; determination in cement by at absorption, 69-1876 ; determinatio fluid inclusions, 69-973 ; determinatio standard rocks by XRF, 69-18 differentiation in upper mantle, 69-12 fractionation in chondrites, 69-2249 alkalic rocks, effect of *T* on, 69-1292 aragonite precipitated from sea-w 69-1323 ; in coexisting amphibole plagioclase, 69-3082 ; in feldspars, fl photometric determination, 69-943 synthetic tourmaline, 69-340 ; r determination by atomic absorp 69-1874, 1875 ; rapid determinatio rocks and minerals, 69-1856 ; *Colo* in lueshite, 69-2380 ; *France,* bore sample, stratigraphical profile, 69-1 rate of leaching in rocks, 69-1 *Germany,* in Keuper carbonates,

ium *(contd.)*
13 ; *Haiti,* in spherulitic andesite, 0-2167 ; *Italy,* in granite, emission pectrography, 69-3096 ; *Ivory Coast,* rate leaching in rocks, 69-1329 ; *Mediterranean,* removal from forest litter, 69-195 ; *Norway,* in nepheline and feldspar, 9-2317 ; *Pacific Ocean,* in water from pres, 69-1320 ; *Rajasthan,* in soils, 69-121 ; *USA,* in sphalerite, 69-2339
compounds, CaO, hot pressing, 69-3037 ; alculation of defect energies in fluoride, 9-1031 ; $3CaO.Al_2O_3.CaSO_4.12H_2O$, tructure, X-ray, 69-1970 ; $3CaO.Al_2O_3.H_2O$, replacement of Al by Cr and Fe, 9-2065 ; $Ca(OH)_2$, oriented transformation to CaO, 69-2067 ; Ca_3PO_4, effect of yrophosphate on crystallization, 69-087 ; $Ca_5(PO_4)_2SiO_4$, X-ray, anal., 69-103 ; $CaSn(OH)_6$, structure, 69-1069 ; lisilicate, in system $CaO-SiO_2-CO_2-H_2O$, 9-3045 ; hydroxide, reaction with kaolinite and allophane, 69-1917 ; silicate, igh *P* polymorph, structure, 69-1045 ; *Colorado,* carbonate remobilized by nagma, 69-3522 ; *Indian Ocean,* carbonate in sediments, 69-2174
ferrite isotype, $NaAlGeO_4$, 69-171
isotopes, in chondrite, 69-2234 ; in ydrothermal, magmatic and sedimentary environments, 69-1257 ; in organic naterials, 69-1257
minerals, carbonates with dolomite tructure, chem., 69-1517 ; *Black Sea,* $CaCO_3$ precipitation potential, 69-1351 ; *Pennines,* $CaCO_3$ in waters, 69-436
lcutta v. India
ldbeck, Cumberland v. England
lderite, *Labrador,* in Fe formation, anal., 9-2279
LIFORNIA, apatitized wood, 69-2541 ; orax, 69-1898 ; carbonate brine anal., 9-1868 ; conglomerate, 69-2548 ; gemtones, 69-1898 ; lahars, 69-2406 ; leucophosphite, 69-2541 ; metagreywacke, 69-1726 ; minerals, book, 69-1898 ; sedimentation, 69-2406 ; TiO_2/Mn in biotites, 9-1294 ; volcanism, 69-2406 ; zonation n blueschist facies, 69-1726 ; *Angel Is., Marin Co.,* jadeitic pyroxene, 69-2278 ; *Bass Lake quadrangle, Mariposa Co.,* manganoan ilmenite, 69-3316 ; *Birch Creek,* metamorphism, 69-3137 ; *Bodie Hills, Mono Co.,* volcanic geology, 69-2406 ; *Cazadero, Sonoma Co.,* age of schists, 69-1816, blueschist facies, 69-3251, coexisting amphiboles, 69-3254, retrograde changes in glaucophane schist, 69-1725 ; *Coast Ranges,* limestones, 69-2546, phosphate rock, 69-2542 ; *continental shelf off Klamath mts.,* Au in sediments, 69-2176 ; *Crestmore,* minerals, 69-1898 ; *Death Valley,* age of biotite, feldspar and zircon, 69-913, desert varnish, 69-2184 ; *Himalaya mine, San Diego Co.,* gems, 69-3069 ; *Hope, San Bernardino,* fluoborite, 69-1509 ; *Inyo mts.,* granitic rocks, 69-2281, 3434, metamorphism, 69-3434, hornblendes, 69-2281 ; *Ione,* kaolinite, anauxite, 69-2860 ; *Kern Co.,* tuffs, 69-2554 ; *Klamath mts.,* ages of schists, 69-1815 ; *Lake Tecopa, Inyo Co.,* silicate minerals in tuff, 69-788 ; *Lassen Peak,* Ni/Co and mafic index in rocks, 69-374 ; *Little Three mine, San Diego Co.,* gems, 69-3069 ; *Marin Co., Tiburon peninsula,* glaucophane, 69-142 ; *Mojave Desert,* tuffaceous rocks, zeolites, 69-2319 ; *Mono basin,* structural and volcanic history, 69-2406 ; *Mono Co.,* augelite, 69-186 ; *Mono Craters,* rhyolite, 69-2406 ; *Nevada Co.,* Au in river gravel, 69-266 ; *New Idria,* chrysotile, lizardite, 69-1447 ; *Red mt.,* ultramafic mass, 69-3202 ; *Saline valley, Inyo Co.,* evaporites, 69-1324 ; *Salton Sea,* epidote from cores, 69-2267 ; *San Bernadino Co.,* veatchite structure, 69-2920 ; *San Diego mine, San Diego Co.,* gems, 69-3069 ; *San Francisco peninsula,* limestones, 69-2546 ; *San Joaquin valley,* phosphate rock, 69-2542 ; *Santa Monica mts.,* plagioclase zoning, 69-623 ; *Searles Lake, San Bernardino,* evaporite mineralogy, 69-2538 ; tychite, 69-2361, pirssonite 69-177 ; *Sierra Nevada,* biotites, 69-3265, granitic rocks, hornblendes, 69-2281, wollastonite polymorphs, 69-2891 ; *southern,* batholith, Ta, 69-2163 ; *Stewart mine, San Diego Co.,* gems, 69-3069 ; *Trinity Co.,* kenyaite, 69-2306, magadiite, 69-2306 ; *Valley Ford,* albite-pyroxene-glaucophane schist, 69-3284 ; *White mt.,* paragenesis in andalusite deposit, rutile, 69-2329 ; *White mts.,* spheroidal weathering, 69-1698 ; *Yosemite National Park,* alaskite, aplite, dyke rocks, pegmatite, 69-2406
Călimani mts., Carpathians v. Romania
Caltanissetta, Sicily v. Italy
CAMEROON, age determination, 69-900 ; *Douala,* diagenesis of hydrocarbons, 69-2189 ; *Douala basin,* clay minerals, diagenetic evolution, 69-1003 ; *Ntem,* granite-gneiss, age determination, 69-900 ; *Tchabalhaléo, Adamoua,* halloysite, sepiolite in bauxite, 69-2861
Campbell plateau v. Pacific Ocean
Camptonite, *Antarctica,* dykes, petrology, anal., 69-711 ; *Romania,* dykes, 69-1716
CANADA, pyrrhotite texture, 69-1603 ; rock-forming micas, 69-532 ; *Baffin Bay,* sedimentological survey, 69-2534 ; *Canadian Shield,* Archaean sediments and volcanic rocks, 69-1552, evolution of the continental crust, 69-1552 ; *Clearwater Lakes,* age of craters, 69-2720 ; *Great Plains,* origin of sodium sulphate deposits, 69-2990 ; *Kingston, Ontario* to *Lac St.-Jean, Quebec,* rocks and minerals, 69-2672 ; *Lake Superior,* pyrrhotite, 69-1059 ; *Manicouagan,* age of crater, 69-2720 ; *Maritime Provinces,* base metal distribution and continental drift, 69-233 ; *Timagami,* pyrite nodules in Cu-Ni ore, 69-1131
—, ALBERTA, bentonite and shale, 69-1007
—, BRITISH COLUMBIA, Mo biogeochemistry, 69-3166 ; *Alberni,* clay minerals, 69-992 ; *Cassiar,* Sn-bearing silicates in skarn, 69-2260 ; *Dodger mine, Salmo,* Bi-robinsonite, 69-2351 ; *Kootenay lake,* geology, 69-3589 ; *Rock Creek, Similkameen,* Ni hydroxide, 69-1535
—, MANITOBA, *Maak lake,* serpentine, 69-2296 ; *Setting lake,* serpentine, 69-2296
—, NEW BRUNSWICK, clay minerals in podzol soils, 69-115 ; pyrite, 69-1499 ; *Mount Pleasant,* In in coexisting minerals from Sn deposit, 69-2146
—, NEWFOUNDLAND, *Labrador,* ferrohedenbergite, ferrohortonolite, 69-1549, mineralogy and petrology of Wabush Iron Formation, 69-2279, olivine in adamellite, 69-1549, plagioclase, 69-1474 ; *Mt. Wright,* pyroxene granulite facies, retrograde metamorphism, 69-1722 ; *Seal lake, Labrador,* arfvedsonite with aegirine-augite, 69-527, niobophyllite, 69-1540 ; *Springdale peninsula,* As, rammelsbergite, löllingite, 69-1133 ; *Tilt Cove mine,* pyrite, ore textures, 69-1134
—, NORTHWEST TERRITORIES, coalingite, 69-3334 ; *Norman Wells, Mackenzie river,* comp. of river water, 69-2203 ; *Pine Point,* sphalerite, 69-1736
—, NOVA SCOTIA, *Bras D'or lake,* core study, 69-2535
—, ONTARIO, alkali syenite, desilication, 69-753 ; argillites and tillites, 69-3123 ; *Alexo mine, Dundonald Township, Porcupine,* heazlewoodite, 69-1775 ; *Bancroft,* list of minerals, 69-1776, star corundum, 69-1242 ; *Bicroft Mine, Bancroft,* cenosite, 69-1428, lit-par-lit gneiss, 69-2604 ; *Cobalt,* Ag-Sb phase, 69-1532, diabase sill, 69-2466, mineralogy of Ni-Co-Ag ores, 69-209 ; *Dundas quarry, Dundas,* rozenite, epsomite, 69-1773 ; *Egan Chute, York river,* eudialyte, zircon, 69-1774 ; *Eganville,* fairchildite, bütschliite, 69-1773 ; *Fishtail lake,* aluminosilicates and gedrite, 69-3588 ; *Ganonoque,* garnet in gneiss, 69-505 ; *Geco mine, Manitouwadge,* Pb isotopes, 69-2773 ; *Grenville,* age of orogeny, 69-1801, plagioclase phenocrysts, 69-3287 ; *Gull Wing lake, Webb Township,* pollucite, 69-1773 ; *Hope lake,* formation of stock, 69-1604 ; *Kirkland lake,* ages of zircon and muscovite, 69-903 ; *Madoc,* ages of zircon and muscovite, 69-903, antimonian baumhauerite, 69-2384, boulangerite, 69-882, guettardite, 69-2383, launayite, 69-2383, madocite, 69-1534, new Pb sulphantimonides, 69-2384, playfairite, 69-2383, QM, 69-2384, sorbyite, 69-2383, sterryite, 69-2383, sulphantimonides, 69-1534, twinnite, 69-2383, veenite, 69-1534 ; *Nakina,* eucryptite, 69-1773 ; *Ranwick Uranium mine,* molybdomenite with clausthalite, 69-599 ; *Strathcona mine, Sudbury,* description and genesis of Fe-Ni-Cu ore deposit, 69-210 ; *Sudbury,* mackinawite, 69-2346, Ti in micas as indicator of metamorphic grade, 69-1723 ; *Wawa,* baryte-quartz-carbonate rock, 69-2567 ; *Wilberforce,* apatite, 69-602
—, QUEBEC, age of quartz syenite, 69-904 ; tourmaline, 69-1431 ; *Desourdy quarry,* minerals in nepheline syenite, 69-1605 ; *Eastern Townships,* awaruite, heazlewoodite, 69-1602 ; *Gagnon,* mineralogy of Fe formation, 69-2280 ; *Gaspé,* bentonite, 69-1943 ; *Jeffrey mine,* chrysotile asbestos, 69-529 ; *Knob lake,* mining property evaluation, ground-water flow, 69-1356 ; *Magdalen Is.,* mineral localities, 69-2673 ; *Mont St. Hilaire,* catapleiite, 69-1422, narsarsukite, 69-1429, nepheline syenite minerals, 69-1605 ; *Mont Tremblant Park,* retrograde contact metamorphism in granulite facies, 69-1724 ; *Montreal,* dawsonite, 69-1073, 1521 ; *Mount Royal,* gabbrosyenite pluton, 69-2196 ; *Mount Wright,* pyroxene granulite facies, retrograde metamorphism, 69-1722 ; *N.W. of St.-Joseph-du-Lac,* lamprophyre, 69-3429 ; *Oka,* apatite, 69-716, 2213, carbonatite, 69-716, pyrochlore, 69-2379 ; *St. Bruno,* dawsonite, 69-1773 ; *Thetford,* chromian diopside, uvarovite, 69-878 ; *Wakefield,* geikielite, 69-3317
—, SASKATCHEWAN, carnallite-sylvite relationships, 69-2536 ; granite reference sample for Th isotope comp., 69-1377 ;

Canada, saskatchewan (*contd.*)
Birch Portage, beryl, 69-1432
—, yukon, *Tintina*, tintinaite, 69-2386
Canadian Shield v. Canada
Canary Is. v. Atlantic Ocean
Canavese v. Italy
'Cancalitic' rock type, 69-1569
Cancrinite, 69-617 ; Ca and K-rich, stability fields and cell dimensions, 69-1227 ; from hydrothermal alteration of clay minerals in NaOH solution, 69-2134 ; hydrothermal reactions of mixtures with nosean, 69-2125 ; X-ray, 69-2125
Canigou, Pyrénées v. France
Canning basin, Western Australia v. Australia
Cannizzarite (-B), *Switzerland*, on galena, 69-3617
Cantal v. France
Canyon mt. complex v. Oregon
Canzoccoli v. Italy
Cape Hallett, Victoria Land v. Antarctica
Cape Parry v. Greenland
Cape Province v. South Africa
Cape Verde Is. v. Atlantic Ocean
Cape York, Queensland v. Australia
Caprera Is., Sardinia v. Italy
Capri v. Italy
Caracolite, structure, 69-1971
Caraiba, Bahia v. Brazil
Carbides, water desorption on crystal hardness, 69-2621
Carbon, determination, 69-46 ; in carbonaceous schists, 69-1345 ; evolution in Earth's crust, 69-343 ; in methane, isotopic comp., 69-446 ; two sources in mantle, 69-343 ; *Algeria*, organic, in silts and muds, 69-3118 ; *Bavaria*, new allotropic form, anal., X-ray, 69-3350 ; *Florida*, organic in recent sediments, 69-3128 ; *Pacific Ocean*, in sediments, 69-1312 ; *Tunisia*, organic, in marls and limestones, 69-3117 ; *Wyoming*, in U deposits, 69-1269
— *Co. v. Wyoming*
— cycle, CO_2 from mantle, 69-1368
— dioxide, determination in dolomite and limestone by acid-base titration, 69-945 ; determination in gas-liquid inclusions, 69-946 ; from mantle to atmosphere, 69-1368 ; inclusions in quartz, 69-3168, 3296 ; in inclusions, 69-1367 ; in inclusions, geochemistry, 69-1369
— isotopes, determinations in carbonates, 69-1382 ; exchange in system CO_2 (gas) – HCO_3^- (solution), 69-425 ; for methane origin, 69-446 ; fractionation factors, 69-2198 ; fractionation in system CO_2 (gas) – CO_2 (aqueous) – HCO_3^- (aqueous), 69-2056 ; in calcites, 69-3091 ; in hydrocarbon gases, 69-449 ; in magmatic gases, 69-449 ; in natural methane, 69-3159 ; *Belgium*, in lamellibranchs, 69-1338 ; *California*, in metamorphosed carbonate rocks, 69-3137 ; *France*, in lamellibranchs, 69-1338 ; *Great Barrier Reef*, in carbonate sediments, 69-1314 ; *Italy*, in lime inclusions in pillows, 69-3108 ; *Pacific Ocean*, ratios in carbonate in sediment, 69-1320 ; *Quebec*, comp. altered by metamorphism, 69-2196 ; *Siberia*, in atmosphere at meteorite fall, 69-2217, in carbonatites, 69-389 ; *Texas*, in metamorphosed carbonate rocks, 69-3137 ; *Utah*, in carbonate rocks, 69-2149
Carbonaceous matter, *India*, in lavas, origin, 69-3420 ; *Japan*, in metamorphic rocks, chem., X-ray, 69-2597
Carbonado, *Brazil*, microstructure, EM, 69-3305
Carbonate-apatite *v.* dahllite
— compounds, *Tennessee*, sorption of Sr isotope, 69-398
— concretions, *Siberia*, bitumen in, 69-1321
— minerals, in phosphate rocks, 69-35 ; precipitation of metastable at low *T* and *P*, 69-1187 ; *Siberia*, in carbonatites, N distribution, 69-390 ; *Utah*, ion activity in brine, 69-1358
— rocks, carbonate grain size, 69-2513 ; formation, book, 69-2822 ; microporosity, 69-2513 ; preparation of surface replicas, 69-1827 ; rapid determination of SiO_2 using gelatin, 69-950 ; stylolitization in, 69-2513 ; uptake of SO_2 by, 69-2996 ; *California*, metamorphism of, 69-3137 ; *France*, contact with bauxite, d.t.a., t.g.a., X-ray, anal., 69-1149, tr. elements in, 69-2868 ; *Italy*, Sr in, 69-3116 ; *Siberia*, breccias in volcanic vents, 69-3532 ; *Texas*, metamorphism of, 69-3137 ; *Vesuvius*, ejecta, comp., Sr in, 69-1647
— sedimentology, *P*-solution phenomena, 69-2513
— sediments, fabric depends on water salinity, 69-2513 ; *Great Barrier Reef*, mineralogy, isotopic comp., 69-1314 ; *South Australia*, isotopic comp., origin, 69-416
Carbonates, diagenesis by organisms, 69-3514 ; dolomite structure, chem., 69-1517 ; flotation of, 69-3000 ; from drill holes, continuous gasometric determinations, 69-2513 ; grain size in carbonate rocks, 69-2513 ; in apatite reflects origin, 69-3340 ; influence of grain size on O and C isotopes, 69-1382 ; natural, C and O isotopes in, 69-3091 ; Nb in solutions of, 69-1184 ; rhombohedral, correction of crystallographic tables for, 69-1966 ; sedimentology seminar, 69-2513 ; solid solution between Mg and Fe, 69-3032 ; substitution in apatite, 69-185 ; syntheses of $BaMg(CO_3)_2$, 69-2513 ; water desorption on crystal hardness, 69-2621 ; *Black Sea*, $CaCO_3$ precipitation potential, 69-1351 ; *Germany*, Keuper, Ca and Mg in, recent sedimentation, 69-2513 ; *Ireland*, biogenic in beach sediments, 69-771 ; *Pacific Ocean*, in water from cores, 69-1320
Carbonatite, characterization by C and O isotopes limited, 69-2196 ; origin, 69-754, 3045 ; origin of associated non-siliceous rock types, 69-2089 ; *Angola*, petrography, 69-1591 ; *Brazil*, geology, 69-726 ; *Bushveld*, dyke, 69-3409 ; *Cape Verde Is.*, anal., 69-3401 ; *Congo*, 69-1771, anal., 69-679 ; *India*, (?) related to fluorite deposit, 69-2995 ; *Kola peninsula*, contains baddeleyite, 69-572 ; *Norway*, *T* of intrusion, 69-3361 ; *Ontario*, baryte-quartz-carbonate rock in, 69-2567 ; *Quebec*, magmatic, 69-716 ; *Siberia*, calcite, concordant and discordant, reaction with host rocks, 69-2461, injection bodies in ijolite, 69-3453, N in carbonates, 69-390, origin of C, 69-389 ; *Transvaal*, valleriite in, 69-2346
Carinthine, *Poland*, anal., opt., 69-815
Carlingford, Louth v. Ireland
Carlsbad v. New Mexico
Carlsbad Caverns v. New Mexico
Carlsberg ridge v. Indian Ocean
Carmarthen, Carmarthenshire v. Wales
Carmarthenshire v. Wales
Carmópolis v. Brazil
Carnallite, *Saskatchewan*, relation sylvinite, tr. elements, 69-2536 ; *Sib platform*, in rock salt, 69-2671 ; *S* 69-3115 ; *USSR*, anal., Rb isomorp in, 69-414
Carneal, Antrim v. Ireland
Carnmenellis, Cornwall v. England
Carnotite, identification by γ-ray spect 69-854 ; *Argentina*, with volborthite malachite, 69-885
Carpathians v. Europe; Romania; Ukrai SSR
Carrock Fell, Cumberland v. England
Carson desert, Ragtown v. Nevada
Caryinite, var. 'arseniopléite', crystal X-ray, 69-2374
Caserta v. Italy
Caspian depression v. USSR
Caspian Sea v. USSR
Cassiar, British Columbia v. Canada
Cassiterite, origin of zoning, 69-1 *Alaska*, in gold placers, anal., 69-2 *Brazil*, with topaz and tourma 69-1114 ; *Cornwall*, distribution in n 69-2950 ; *Czechoslovakia*, in pegma 69-674 ; *France*, in pegmatite, 69-3 in pegmatite, anal., refr. ind., 69-32 *Malaya*, magnetism in, 69-1479; *Rwa* 69-3620, mined, 69-2953, modes occurrence, 69-2952 ; *Siberia*, In, Sc in, 69-1112 ; *Tasmania*, magnetis 69-1479 ; *Ukrainian shield*, allu anal., 69-3318 ; *Utah*, 69-2019
Castillon massif, Ariège v. France
Castle Peak, Pasayten river v. Washingt
Castleton, Derbyshire v. England
Catalonia v. Spain
Catapleiite, Raman spectrum, 69-36 *Quebec*, in pegmatite, 69-1422, in vu syenite, opt., 69-1422
Cathode ray polarography, sulphide d mination, 69-2811 ; U determina 69-2812
Cathodoluminescence, of sphalerite, 2340
Cation distribution, Fe in crocidolite, 143 ; glaucophane, 69-142 ; zinc fe by neutron diffraction, 69-172
— exchange, in chabazite, 69-2124
Caucasus v. Russian SFSR
Cauldrons, resurgent, definition, deposits with, 69-2406 ; *Nigeria*, sidence, 69-1624
Causses v. France
Cazadero, Sonoma Co. v. California
Celadonite, hydroxyl absorption ba IR, 69-2825 ; *Lipari Is.*, -tridy cristobalite paragenesis, 69-1 *Nevada*, tr. element anal., X-ray, 1455
Celestine, IR diffraction, 69-1969 ; so ility, 69-1193 ; thermal expansion 69-2633 ; *Carpathians*, aggregates sediments, 69-2179 ; *Glamorgan*, 1760
— –baryte series, frequency distributio compositions in, 69-594
Celestite v. celestine
Celsian, calculated powder patterns, 2757
Cement, atomic absorption anal., 69-1 high-alumina, quaternary phase, c and structure, anal., opt., X-ray, 69-2 pleochroite in clinker, 69-289 ; Portl microstructure of hydrated, 69-28

ent *(contd.)*
w materials, reaction with refractories, 9-280
osite, *Ontario,* in ore, sp. gr., H., anal., ct., X-ray, IR, 69-1428
ral Asia v. Asia
ral City quadrangle v. Colorado
mic systems, effect of very high *P,* 9-280
mics, cryochemical method of prepara- on, 69-280 ; effect of mechanical forces uring heat treatment, 69-280 ; fabrica- on, 69-280 ; fabrication of spheres and ibes, 69-3037 ; forming by electro- horetic deposition, 69-3037 ; properties f fired clay mineral mixtures, 69-98 ; eactions during sintering, 69-280 ; re- ctions in multiphase during firing, 69- 80 ; thermomechanical processing, 69- 037 ; vibration pressing of powders, 9-3037 ; *Nepal,* industrial feasibility tudy, 69-99, 531 ; *USSR,* permeability nd clay mineralogy, 69-994
ium, depleted in marine apatite, 69- 070 ; determination in rocks by neutron ctivation, 69-69 ; in allanite, 69-378 ; n pyrochlore, 69-2378 ; in sphene, 69- 78 ; in standard rocks, 69-1374 ; *Colorado,* in lueshite, 69-2380 ; *Idaho,* in yenite, 69-2470 ; *Mexico,* in apatite, 9-2370 ; *New Zealand,* in stream sedi- nents, 69-397
ný potok v. Czechoslovakia
ro de los Lobos, Almeria v. Spain
ro de Mercado, Durango v. Mexico
ro de Pasco v. Chile ; Peru
ussite, *Leicestershire,* in ore, 69-2665 ; *Utah,* Ag in, 69-2976
vantite, *Massif Central,* 69-2959
ium v. caesium
ké Středohoří v. Czechoslovakia
tas, Gironde v. France
ne di Cotorniano, Siena v. Italy
YLON, cordierite, wollastonite, cordierite-ranulite facies, 69-1720 ; geology, book, 9-980
bazite, cation exchange in, 69-2124 ; lkali metal cation equilibria with, 69- 235 ; *Tasmania,* comp., 69-1601
chani mt., Arequipa v. Peru
AD (*Tchad*), *Kanem,* gaylussite, trona, alt deposits, 69-1770 ; *Lake Tchad,* aline water anal., 69-1770
ffee Co. v. Colorado
il, Simla hills v. India
ne des Puys v. France
krabandha, Bihar v. India
lcedony, *Quebec,* localities, 69-2673 ; *Western Australia,* localities, 69-1245
lcocite, leaching of, 69-2999 ; *India,* 69- 968 ; *Oslo,* 69-2973 ; *Transvaal,* in reccia pipes, 69-214 ; *Urals,* in ore eposit, 69-216 ; *USSR,* Re and Mo ontent, 69-405 ; *Uzbek SSR,* 69-2969
lcopyrite, annealing of ore, 69-2090 ; ubic, 69-2092 ; in fluorite, 69-2381 ; Mössbauer spectra of ^{57}Fe, 69-1037 ; olubility of Ge in, 69-3024 ; *Austria,* amellae of low after high, 69-2937 ; *Brazil,* 69-2003 ; *Czechoslovakia,* 69- 385 ; *France,* 69-2979, klockmannite nclusions in, 69-2979 ; *Germany,* 69- 993 ; *India,* 69-2981, minor elements in, 9-3087 ; *Maryland,* 69-2680 ; *New Brunswick.* In in, 69-2146 ; *New South Wales,* in Bi-Mo ores, 69-225 ; *Oslo,* 69- 973 ; *Portugal,* in borehole, 69-2971 ; *Pyrenees,* in limestone from skarn minerali- ation, 69-2010 ; *Slovakia,* in polymetallic deposit, 69-563 ; *Sudbury,* in orebody, 69-210 ; *Transvaal,* 69-2986, in gossan, 69-2982 ; *Urals,* in ore deposit, 69-216 ; *USSR,* Re and Mo content, 69-405 ; *Uzbek SSR,* 69-2969, Pt group elements in, 69-2147
Chalcothallite, *Greenland,* in vein, comp., X-ray, H., 69-1528
Chalk, EM of surface replicas, 69-1827 ; origin from coccolith muds, 69-2518 ; *England,* from boreholes, anal., petrography, 69-1672
Chalupki v. Poland
Chaméane, Puy-de-Dôme v. France
Chamoli, Garhwal v. India
Chamosite, *Guinea,* in sands, origin of, 69-530
Champ-du-Feu v. France
Chañaral-Taltal v. Chile
Chandragiri, Andhra Pradesh v. India
Channapatna, Mysore v. India
CHANNEL Is., radiometric ages, 1957-1962, 69-1802
Chapmanite, *Massif Central,* 69-2959
Charente v. France
Charnockite–anorthosite series, *New York, anal.,* 69-3591
— series, term to be dropped, 69-3469
Charnockites, accessory minerals in, origin, 69-1701 ; petrogenesis, 69-820 ; problem of genesis, 69-3471 ; *P-T* stability range, 69-313 ; reason for colour, anal., 69-3362 ; use of name, 69-3469 ; *French Pyrenees,* age, Sr isotopes, 69-2722 ; *India,* 69-3469, coexisting pyroxenes in, *T* of crystallization, 69-3237, orthoclase in, 69-3577, para-, anal., 69-3581, syenitic petrography, 69-1598, triclinicity of alkali feldspars, 69-3577 ; *Ivory Coast,* age, 69-2710 ; *Karelia,* age, 69-2732 ; *Kola peninsula,* para-, anal., 69-818 ; *Madras,* 69-2400, colour in, mircoprobe anal., 69-691 ; *Malagasy Republic,* comp., petrography, 69-1597, petrology, 69-2596 ; *New South Wales,* in basic pipes, anal., petrography, 69-3428 ; *Siberia,* in anorthosite pluton, 69-3565 ; *Sweden,* 69-2154, anal., phase equilibria in, 69-2574
Charnockitic rocks, comp., nomenclature, 69-2400 ; origin, literature review, 69-1722 ; *Andhra Pradesh,* chlorine in hornblende and biotite, 69-3248, coexisting pyroxenes in, 69-3233, pyroxenes in, origin, 69-3234 ; *India,* 69-3575 ; *Madras,* genesis, 69-3470 ; *Malawi,* 69-3407 ; *Scandinavian shield,* trends, 69-2400 ; *South Africa,* adamellite porphyry, 69-3534, 3570, anal., 69-3571, pigeonite in, 69-3570
Charnockitization, *Malagasy Republic,* role of alkaline metasomatism, 69-2596
Chassenon, Haute-Vienne v. France
Chatkal mts., Soviet Central Asia v. USSR
Chatkal range v. USSR ; Uzbek SSR
Chatkal'sk ridge, Tien-Shan v. USSR
Chedeville-en-Ambazac, Haute-Vienne v. France
Chemical analyses, evaluation in determining stoichiometry, 69-2318 ; methods for Mn valency in manganite, 69-1510 ; of amphiboles, representation in 11-dimensional space, 69-1443 ; of feldspars, representation in 11-dimensional space, 69-549 ; preparation of hard materials, 69-27
— bonding, in silica and silicates, 69-135
"Chemical model", parameters of mineralogical associations, 69-625
Chert, *Idaho,* anal., comp., 69-3509 ; *Kenya,* formation of bedded, 69-3533, genesis, 69-1695, transition from magadiite, 69-3533 ; *Nevada,* anal., comp., 69-3509, with interbedded baryte, 69-2040 ; *Tanzania,* genesis, 69-1695 ; *Transvaal,* amino acids in, 69-3135 ; *Western Australia,* formation of bedded, 69-3533
Cheshire Co. v. New Hampshire
Chesterfield v. Massachusetts
Chevkinite, *USA,* in ash beds, opt., X-ray, 69-1425
Chiastolite, *Kola peninsula,* paramorphs of kyanite on, 69-1718
Chiba, Honshu v. Japan
Chibargata-Agata, Tien-Shan v. USSR
Chichibu mine, Honshu v. Japan
Chickens Islands, North Is. v. New Zealand
CHILE, apatite-bearing magnetite ores, 69-2028 ; calcareous intercalations in volcanics, 69-3511 ; ignimbrite, 69-1615 ; nitrate deposits, 69-2553 ; pumice, 69-1615 ; saltpetre, 69-1152 ; *Alcaparrosa,* tamarugite structure, 69-2927 ; *Andes,* 'Andesite' formation, 69-3437 ; *Cerro de Pasco,* Cu in pyrite, 69-3322 ; *Chañaral-Taltal,* Fe deposits, radioactivity, Cretaceous granites in andesitic volcanics, 69-198 ; *Copiapó, Atacama Desert,* age of landform evolution and mineral alteration, 69-1267, saltpetre, 69-1152 ; *Las Animas,* radioactivity, 69-198 ; *Mina Remolinos Nuevo, Atacama,* delafossite, 69-3628 ; *Quetana,* amarantite, 69-1077 ; *Sierra Gorda,* penfieldite, 69-1488 ; *Tarapaca,* cryptomelane, 69-1512
Chimakurti, Andhra Pradesh v. India
CHINA, *Kalgan,* volcanic complex, 69-695
China clay, *Nepal,* anal., 69-99
China Muerta, Neuquen v. Argentina
Chindwin river v. Burma
Chinkuashih v. Taiwan
Chinyunu v. Zambia
Chios v. Greece
Chlorapatite, in chondrites, anal., 69-3183 ; IR spectrum, 69-1078 ; structural origin of physical property differences, 69-184 ; synthetic, dielectric properties, 69-852 ; unit cell, opt., halogens in, 69-3340 ; *Norway,* anal., IR, 69-602
Chlorides, solubility, 69-1360 ; thermal diffusivity of NaCl, 69-2631
Chlorine, in biotites, 69-3269 ; *Andhra Pradesh,* in hornblende and biotite, 69-3248 ; *England,* in granitic rocks, 69-1283 ; *S.W. England,* in granites, 69-3095, in tourmalines, 69-2270
Chlorins, geochemistry in soils, sediments and sedimentary rocks, 69-400
Chlorite, cause of absorption bands, 69-1033 ; comp. from physical props., 69-3272 ; dehydration diagrams, 69-1904 ; equilibrium data, 69-1215 ; excess ^{40}Ar in, 69-2741 ; magnetic susceptibility and comp., anal., 69-1753 ; opt. absorption spectra, structure, colour, pleochroism, 69-1952 ; structure, 69-2901 ; studies in *USSR,* 69-1921 ; X-ray, 69-37 ; X-ray, improved resolution, 69-1903 ; *California,* replacement in retrogressed glaucophane schist, 69-1725 ; *England,* in Chalk, 69-109 ; *Europe,* in Chalk, 69-109 ; *France,* in sediments, 69-406, in pegmatite, 69-869 ; *Germany,* co-existence of different types, comp., 69-2300, in talc, 69-2299, in ultrabasic metamorphic rocks, anal., opt., 69-3564 ; *Hawaii,* in marine environment, 69-1008 ;

Chlorite *(contd.)*
Iceland, in geothermal drill holes, 69-2211 ; *Morocco*, nodules with Mn deposits, X-ray, comp., genesis, 69-1461 ; *North Carolina*, on dumps, 69-2681 ; *Siberia*, with Zn-Pb deposits, 69-540 ; *Sicily*, oolitic, in basalts, 69-2427 ; *Skye*, anal., 69-1706 ; *Sweden*, opt., 69-2411 ; *Ukrainian SSR*, in slates, comp., 69-1462 ; *Virginia*, in pegmatite, 69-879
— -montmorillonite, anal., d.t.a., X-ray, 69-1908
— rock, *Maryland*, anal. for co-existing magnetite, rutile, apatite and chlorite, origin, 69-3313
Chloritite, α- *v.* donbassite
Chloritization, during serpentinization, 69-796
Chloritoid, polarized opt. absorption spectra, 69-846 ; thermal stability, 69-2107 ; *France*, in phyllites, anal., opt., sp. gr., X-ray, 69-510 ; *India*, in phyllonite, 69-3622 ; *Italy*, porphyroblasts in phyllite, chem., opt., X-ray, 69-2264 ; *Rhode Is.*, masonite, 69-1246 ; *Romania*, in schists, anal., refr. ind., 69-1421 ; *Scotland*, paragenesis, anal., 69-1419 ; *Spain*, in schists, symmetry, 69-1420
Chlorohastingsite, *Siberia*, anal., opt., X-ray, 69-3258
Chlorophoenicite, *Franklin*, structure, 69-191
Chloropyromorphite group, structure, 69-1978
Chlorospinel, ferrian, *Ireland*, in larnite-spinel rock, sp.gr., anal., opt., origin, 69-577
Choctawhatchee Bay v. Florida
Cho Dien v. Vietnam
Chondrodite, crystallography, twinning 69-2254 ; Raman spectrum 69-3607
Chor, Himachal Pradesh v. India
Chromates, of Ba, Pb and Sr, thermal expansion of, 69-2633
Chromatography, circular thin layer, anal. of minerals, 69-955 ; of isotopes, 69-48 ; separation of rare earth elements, 69-70
Chrombiotite, *Styria*, 69-534
Chrome ore, microscopy and genesis, 69-982 ; rapid anal., 69-2778
Chromite, leaching of, 69-2999 ; photometric determination of V in, 69-1854 ; rapid anal., 69-2778 ; *Austria*, in schist, 69-2591 ; *Bushveld*, range in comp., anal., 69-737 ; *Finland*, in sulphide ore and skarn, anal., 69-2333, Zn and V in, 69-2333 ; *India*, 69-3418 ; *South Africa*, occurrence and reserves, 69-2940, pneumoconiosis in miners, 69-888 ; *Togo*, lenses in serpentinite, 69-1138 ; *Transvaal*, in gossan, 69-2982 ; *Urals*, associated with magmatism, 69-3392 ; *West Pakistan*, anal., 69-2983 ; *Witwatersrand*, in reef, anal., 69-1482
— ore, *Finland*, in layered ultrabasic rocks, 69-1996
Chromitite, liquid immiscibility in seam, 69-3472 ; *Bushveld*, mineralogy, grain size and sorting anal., 69-737 ; *Transvaal*, anal., origin, 69-2982, magnetic, anal., 69-3410
Chromium, geochemistry and economic geology, book 69-982 ; in andesites, 69-2168 ; in igneous rocks, 69-371 ; in Fe meteorites, 69-2236 ; in synthetic tourmaline, 69-340 ; in topaz, influence on colour, 69-3216 ; rapid determination by atomic absorption, 69-1874 ; salinity indicator in clays, 69-395 ; *Black Sea*, in Fe-Mn concretions, 69-3134 ; *Czechoslovakia*, in xenoliths of kimberlite pipes, 69-372 ; *Europe*, distribution in Zechstein deposits, 69-415 ; *France*, from borehole, stratigraphical profile, 69-1317 ; *Massif Central*, in granitic rocks, 69-657 ; *New Zealand*, in augites, hypersthenes and hornblendes, 69-3083 ; *Romania*, distribution in volcanites, 69-1307 ; *St. Kitts*, in lavas, 69-724 ; *South Africa*, in xenoliths of kimberlite pipes, 69-372 ; *Tunisia*, in marls and limestones, 69-3117 ; *Urals*, in bituminous shales, 69-3133 ; *USA*, in black shales, 69-2175 ; *Yakutia*, in xenoliths of kimberlite pipes, 69-372
— minerals, *Finland*, hydrated oxide, anal., sp.gr., X-ray, reflectivity, 69-1536
Chrysoberyl, removal of fluorite from, 69-1863 ; *Kazakh SSR*, collomorphic, cryptocrystalline and spherulitic, X-ray, 69-580, with diaspore, X-ray, 69-580
Chrysocolla, anal., structure, formula, d.t.a., IR, EM, 69-2302 ; pseudo-layered silicate, 69-2302
Chrysoprase, *Western Australia*, localities, 69-1245
Chrysotile, diffraction profiles, 69-148 ; *California*, anal., X-ray, opt., sp. gr., 69-1447 ; *Canada*, EM, 69-529 ; *Italy*, EM, 69-993 ; *South Africa*, 69-1141 ; *USSR*, determination of fibre dimensions, 69-2297
Chudzyavr lake, Kola peninsula v. Russian SFSR
Chukotka, Soviet Far East v. Russian SFSR
Chulitna river v. Alaska
Churchite, *Urals*, in pegmatite, anal., opt., sp.gr., d.t.a., X-ray, 69-606
Chu-Sarysu depression v. Kazakh SSR
Cima d'Asta, Trentino v. Italy
Cimino volcano v. Italy
Cinnabar, *Brazil*, 69-1114 ; *Germany*, 69-2993 ; *Greater Caucasus*, opt., X-ray, origin, 69-2353 ; *Idaho*, in stibnite, anal., 69-2676
Circum-Pacific province v. Pacific Ocean
Circum-Pacific region v. Pacific Ocean
Ciscaucasia v. Russian SFSR
Civitavecchia, Lazio v. Italy
Clark mts. v. Antarctica
Clark range v. Montana
Claro, Tessin v. Switzerland
Classification, of alkalic basalts, 69-628 ; of clastic rocks, 69-3483 ; of crystalline schists, 69-2573 ; of eruptive rocks, 69-1544 ; of rocks, 69-626, 627
Clastic rocks, classification, size boundaries, 69-3483
Clausthalite, thermal expansion, 69-2632 ; *Czechoslovakia*, 69-871 ; *Ontario*, in U mine, 69-599
Clay liquid systems, cooling coefficients, 69-97
— minerals, adsorption of butane, 69-40 ; alteration by electron irradiation, 69-2853 ; aqueous solubility, 69-319 ; as catalysts, 69-2837 ; as electron acceptors and donors in organic reactions, 69-1919 ; Ca-Al exchange equilibria in, 69-2842 ; combined d.t.a., d.t.g. and t.g.a., 69-989 ; comp. and structure of dioctahedral 2:1, anal., 69-1910 ; cooling coefficients of suspensions, 69-97 ; high *T* reactions of mixtures, 69-98 ; hydrothermal reaction with NaOH, 69-2134 ; hydroxyl vibrations in crystalline, 69-2825 ; identification by Newton's cooling coefficients, 69-97 ; IR, 69-1902 ; layer charge sites and swelling properties, 69-1911 ; m
tures, high *T* reactions and cera
properties, 69-98 ; new, roggianite,
3345 ; reaction with leuco dyes, 69-28
reaction with unsaturated organic c
pounds, 69-2837 ; results of study
USSR, 69-1921 ; semi-micro anal.
major elements, 69-2827 ; Soviet bib
graphy, 69-1921 ; structure and in
stitial water, 69-2873 ; study by s
angle X-ray scattering, 69-81 ; st
by thermal methods, 69-2826 ;
content of Keuper Marl, 69-997 ; X-
69-2769 ; *Aberdeenshire*, 14Å swel
mineral, 69-2850 ; *Argentina*, in s
ments, 69-3512 ; *Azerbaijan SSR*,
molasse formations, 69-2869 ; *Ba
shire*, in metamorphic limestone, X-
d.t.a., EM, 69-107 ; *California*, in alte
tuffs, 69-788, in tuffaceous rocks,
2319 ; *Cameroon*, diagenetic evolutio
core, X-ray, anal., 69-1003 ; *Can
mixed layer, 69-992 ; *Colorado*, influe
radioactivity in sediment, 69-31
France, indicating diagenesis or m
morphism, 69-113, in Jurassic sedime
69-406 ; *Hampshire Basin*, provin
69-112 ; *Italy*, from basalt weather
genesis, anal., X-ray, d.t.a., 69-2
kandite group with alunite, EM, a
X-ray, d.t.a., t.g.a., 69-2880, m
montmorillonite, mixed-layer, X-
69-1907, talc-saponite, mixed layer,
IR, 69-993 ; *Kazakh SSR*, in ch
limestone, 69-1940 ; *Libya*, mixed la
rectorite, anal., X-ray, d.t.a., EM,
1909 ; *Malagasy Republic*, 69-10
New Brunswick, in podzol soils, X-
chem., IR, 69-115 ; *Poland*, 69-1
combined d.t.a., d.t.g. and t.g.a.,
989 ; *Queensland*, bentonite dep
origin, anal., 69-111 ; *Russian SF
formation in various facies, 69-28
Scandinavia, in soil profiles, X-ray,
1939 ; *Texas*, from borehole, 69-19
Transvaal, interstratified, anal., X-
69-1906 ; *Tunisia*, in marls and li
stones, X-ray, 69-3117 ; *Ukrainian S
formation in various facies, 69-28
Uruguay, in sediments, 69-3512 ; *Uta
bentonite beds, 69-1926
— rocks, factors determining mineral co
69-1009
Clays, bentonitic, book, 69-987 ; centrif
particle size analyser, 69-2824 ;
bined d.t.a., d.t.g. and t.g.a., 69-9
EM in anal., 69-990 ; expanding,
stretching frequencies of synthetic in
layers in, 69-1913 ; hydrothermal ori
69-2876 ; kaolinite from silica s
washings, 69-995 ; microstructure
London Clay, 69-998 ; muscovite-m
morillonite mixed-layer, X-ray, 69-1
organic media rheology, 69-28
punched-card storage of data, 69-
separated from sand by hydrocycl
69-995 ; surface properties investiga
by gas chromatography, 69-28
symposium proceedings, 69-2824 ;
elements as salinity indicators, 69-3
tr. elements in marine, 69-395 ; *Alb
in bentonite and shale, mineralogy, a
XRF, X-ray, 69-1007 ; *Argentina*, in
stitial in arenites, X-ray, d.t.a., 69-9
Assam, beds alternating with sandsto
origin, 69-3503 ; *Atlantic Ocean*, mol.
distribution of humic and fulvic
fractions, 69-1318 ; *Canada*, ma
69-992 ; *Derbyshire*, K-bentonite,

ys *(contd.)*
927, pockets in limestone, origin, 69-2515 ; *Devon,* ball-, origin, X-ray, anal., 69-1011 ; *England,* kaolinite, illite and montmorillonite in, X-ray, 69-1677 ; *France,* from weathered granites, 69-2878, 2879, geochemistry, anal., 69-1317 ; *Greece,* from recent sediments, opt., X-ray, anal., 69-1938 ; *Hawaii,* marine, age, 69-1008 ; *Illinois,* in pesticide formulation, physical and chemical data, 69-996, under—, petrography and uses, 69-999 ; *India,* d.t.a. and electrometric studies, 69-1001 ; *Israel,* mineralogy, d.t.a., 69-2872 ; *Italy,* comp. of interstitial water, 69-2873, interbedded with bentonite, X-ray, c.e.c., d.t.a., 69-2866 ; *Kentucky,* stratigraphic and mineralogic relations, ceramic properties, 69-2867 ; *Mozambique,* interstratified, fractionated, X-ray, 69-86 ; *Nepal,* nature and chem. data, 69-531 ; *North Sea,* comp. of interstitial water, 69-2873 ; *Poland,* combined d.t.a., d.t.g. and t.g.a., 69-989 ; *Siberia,* from siltstone residuum anal., heating curves, 69-2527 ; *Siberian platform* zones of kimberlite residuum anal., 69-1935 ; *Sicily,* comp. of interstitial water, 69-2873 ; *Staffordshire,* K-bentonite, 69-1927 ; *Switzerland,* metamorphic changes in, 69-1694 ; *Tennessee,* stratigraphic and mineralogic relations, ceramic properties, 69-2867 ; *Tunisia,* comp. of interstitial water, 69-2873 ; *USSR,* mineralogy and ceramic permeability, 69-994 ; *Wales,* illitic, interstratified, from ash, X-ray, d.t.a., anal., 69-85 ; *Washington,* deposits in saprolite, 69-2870
aystone, *Cameroon,* clay minerals sequence in core, X-ray, anal., 69-1003 ; *USA,* Cd in, 69-2177
ear creek v. Colorado
ear Creek Co. v. Colorado
earwater lakes v. Canada
eavelandite, *Massachusetts,* platy albite, 69-2313
eveland mine, Tasmania v. Australia
inch river v. Tennessee
inochrysotile *v.* chrysotile
inohumite, crystallography, twinning 69-2254 ; Raman spectrum, 69-3607
inoptilolite, formation from rhyolite glass, 69-2554 ; thermal props. compared with heulandite, d.t.a., 69-2322 ; thermal stability, 69-2323 ; *California,* from tuffs, 69-2554, 2319, in altered tuffs, 69-788 ; *Italy,* diagenetic, 69-3520 ; *Japan,* stability, cation exchangeability, X-ray, IR, 69-2128 ; *USA,* in continental shelf sediments, X-ray, 69-2551
inopyroxene, anal., 69-1476 ; comp., paragenetic types, 69-1435 ; Fe and Mg in, 69-2261 ; magnetic moment of Fe^{2+}, 69-858 ; tr. elements in co-existing garnet and, 69-2168 ; *Assynt,* lattice parameters, 69-1646 ; *Auckland,* in ultramafic nodules, chem., opt., X-ray, 69-3199 ; *Ben Nevis,* anal., 69-638 ; *California,* in clinopyroxenite, anal., 69-3202 ; *Colombia,* in eclogite boulders, anal., properties, 69-725 ; *Czechoslovakia,* in massif, anal., 69-2275 ; *France,* in lavas, Fe^{2+} content and cell parameter, 69-3229 ; *India,* in anorthosite, anal., 69-3575 ; *Italy,* in pyroxenite, opt., X-ray, sp.gr., 69-1436, in serpentinite, anal., 69-1408 ; *Japan,* and co-existing garnet in eclogite, anal., 69-3426 ; *New South Wales,* in inclusions in basic pipes, anal., opt., 69-3428 ; *New Zealand,* in xenolith, anal., 69-710 ; *Quebec,* in Fe formation, anal., 69-2280 ; *Siberia,* in xenoliths, anal., 69-1586 ; *Skye,* in ultrabasic dykes, anal., opt., 69-2414 ; *South Africa,* in charnockitic rocks, 69-3571 ; *Spain,* reaction rims in olivine gabbro, 69-2424 ; *Switzerland,* in serpentinite, anal., 69-1408 ; *Texas,* in melilite-olivine nephelinite, anal., 69-3431 ; *Western Australia,* in metagabbro, anal., 69-3587
Clinozoisite, *Iceland,* in geothermal drill holes, 69-2211 ; *New York,* structure, 69-1981 ; *Western Australia,* 69-340
Clintonite, *Urals,* 69-1453
Closehouse, Yorkshire v. England
Coal, As in bituminous, 69-2185 ; Be and V correlation with ash, 69-404 ; bituminous ash, comp. and viscosity correspond to eruptive rocks, 69-2409 ; fusain, 69-781 ; pelleting, 69-781 ; petrography, progress and applications, 69-782 ; petrography, use of partial demineralization, 69-781 ; reflectance in screened size-fractions, 69-3604 ; shrinkage factors calc. from concretions, 69-2558 ; spectrochemical anal. of ash, 69-978 ; thin section preparation, 69-781 ; tonstein in, volcanic origin, 69-769 ; *Australia,* maceral anal., 69-781 ; *Colorado,* thermally altered, petrology, *T* gradient, 69-2565 ; *Himalayas,* petrography, 69-781 ; *Illinois,* organic and pyritic S in, 69-1341 ; *India,* ash 'skeletographs', coking characteristics, metamorphosed, petrochemistry, petrography, reflectance, 69-781 ; *South Wales,* classification, details of individual seams, rank, 69-895 ; *Ukrainian SSR,* siliceous concretions in, origin, 69-785
Coalfields, *France,* correlation by tonsteins, 69-2520 ; *South Wales,* geology, 69-1675
Coalingite, *Canada,* in drill cores, 69-3334
Coasta lui Rusu, Carpathians v. Romania
Coast Ranges v. California; Oregon; Washington
Coastal Range v. Taiwan
Coates, Western Australia v. Australia
Cobalt, Ontario v. Canada
Cobalt, Co/Ni ratio and mafic index in igneous rocks, 69-374 ; Co/V/Ni ratios, geochemical trends, 69-370 ; distribution in carbonaceous schists, 69-1345 ; in andesites, 69-2168 ; in pyrite, 69-1264 ; in standard rocks, 69-56 ; in synthetic tourmaline, 69-340 ; influence on colour in topaz, 69-3216 ; neutron activation anal., 69-2805 ; *Aleutian Is.,* Co/Ni ratio in igneous rocks, 69-374 ; *Azerbaijan,* in ultramafic rocks, spectrographic data, 69-373 ; *Black Sea,* in Fe-Mn concretions, 69-3134 ; *California,* Co/Ni ratio in igneous rocks, 69-374 ; *Czechoslovakia,* in pyrite, 69-2144 ; *Europe,* in Zechstein deposits, 69-415 ; *Hawaii,* Co/Ni ratio in igneous rocks, 69-374 ; *Indian Ocean,* in sediments, 69-2174 ; *Michigan,* Co/Ni ratio in igneous rocks, 69-374 ; *New Zealand,* in augites, hornblendes and hypersthenes, 69-3083 ; *Pacific Ocean,* in water from cores, 69-1320 ; *Paricutin,* Co/Ni ratio in igneous rocks, 69-374 ; *Pennsylvania,* Co/Ni ratio in igneous rocks, 69-374 ; *Rajasthan,* in soils, 69-3121 ; *Romania,* in ore, 69-1261, in volcanites, 69-1307 ; *St. Kitts,* in lavas, 69-724 ; *Skaergaard,* Co/Ni ratio in igneous rocks, 69-374 ; *South Australia,* in laterites, 69-2964 ; *Tasmania,* Co/Ni ratio in igneous rocks, 69-374
— compounds, disulphides, diarsenides, sulpharsenides, structural stability, 69-1957
— isotopes, *Tennessee,* sorption by hydrous oxides, 69-398
— minerals, containing CoOOH, 69-2338 ; *Cyprus,* arsenide with Ni, 69-1531
— ores, *Cobalt,* mineralographic characteristics, paragenesis, 69-209
Cobaltite, isomorphous substitution in synthetic, 69-3019 ; X-ray. opt. anisotropy, thermal stability, 69-1494 ; *Slovakia,* in carbonate gangue, anal., X-ray, 69-563
Coccoliths, in lithographic limestones and marls, 69-2517
Cockermouth, Cumberland v. England
Cocklebiddy, Western Australia v. Australia
Cocos Is. v. Indian Ocean
Cocos ridge v. Pacific Ocean
Codouls, Var v. France
Coercivity spectra, to determine magnetic stability of igneous rocks, 69-3610
Coesite, 69-1465 ; in diamonds, X-ray, 69-3061 ; –stishovite transition, 69-3035 ; thermal expansion, 69-2632 ; transition from quartz, 69-1224
Coffinite, *Czechoslovakia,* 69-2385
Cogne, Val d'Aosta v. Italy
Cohenite, decomposed to graphite and ferrite, in meteorite, 69-480 ; with schreibersite, in meteorite, 69-480
Coke, *Colorado,* in coal seam 69-2565
Colemanite, stability field, 69-2094
Collet-de-Dèze, Lozère v. France
Colli Albani v. Italy
Colloidal systems, symposium proceedings, 69-2824
Collophane, *Derbyshire,* uraniferous, in limestone fissures, 69-3615
Coloane Is. v. Macao
COLOMBIA, emeralds, 69-3064 ; *Guajira peninsula,* eclogite boulders, 69-725
Colombotantalite *v.* columbotantalite
COLORADO, Hg in Navajo Sandstone, 69-3132 ; isotopic comp. of ore leads, 69-1274 ; U-V ores localized by sedimentation, 69-2008 ; volcanic rocks, 69-2475 ; Zn in magnetite, 69-1481 ; *Adams Co.,* soils, 69-3129 ; *Boulder,* hydrogarnet, 69-2305, prehnite, 69-2305 ; *Browns Canyon, Chaffee Co.,* F, prospecting, 69-2224 ; *Central City quadrangle,* cordierite in gneiss, 69-2608; *Clear Creek,* anal. of stream waters, 69-3156 ; *Clear Creek Co.,* rutile and topaz in gneiss, 69-2610 ; *Colorado Plateau,* U, V and Se in U-V ore bodies, 69-1119 ; *Evergreen,* rutile and topaz in gneiss, 69-2610 ; *Fremont Co.,* triplite from pegmatite, 69-1080 ; *Front range,* gabbro, 69-2467, ring-dyke complex, 69-3451 ; *Gem Park, Wet mts.,* alkalic rocks, 69-2468, lueshite, 69-2380 ; *Gold hill, Boulder Co.,* telluride ores, 69-2957 ; *Hot Sulphur Springs quadrangle, Grand Co.,* stratigraphy, structure, volcanic rocks, 69-2482 ; *Jamestown, Boulder Co.,* telluride ores, 69-2957 ; *Jefferson Co.,* rutile and topaz in gneiss, 69-2610 ; *Lake George,* Be, Sn and W in greisen, 69-1263, granite, 69-1280 ; *Lake Co.,* rhodochrosite, 69-2687 ; *McClure mt., Wet mts.,* alkaline complex, 69-1778, 2468 ; *Magnolia, Boulder Co.,* telluride ores, 69-2957 ; *Morrison quadrangle, Jefferson Co.,* gneiss, igneous rocks, 69-721 ; *Needle mts.,* Precambrian chronology, 69-2713 ; *Park Co.,* rhodochrosite, 69-2687 ; *Phillips mine, Boulder Co.,* ferberite, Mössbauer

Colorado *(contd.)*
spectrum, 69-2925 ; *Poison ridge, Rabbit Ears range,* hydrothermal alteration, 69-2568 ; *Purgatoire valley,* thermally altered coal, 69-2565 ; *Road Gulch area, Wet mts.,* monazite, bastnäsite, thorite, fergusonite, 69-1778 ; *San Juan Co.,* rhodochrosite, 69-2687 ; *San Juan mts.,* Au, 69-1103, travertine, 69-3522 ; *Shirley Basin,* U ore, 69-2007 ; *Silver Plume,* jalpaite, 69-1491 ; *Snowflake mine, Teller Co.,* thalenite, 69-2268 ; *Spanish Peaks,* igneous rocks, 69-720 ; *Sugarloaf, Boulder Co.,* telluride ores, 69-2957 ; *Unaweep Canyon,* Precambrian chronology, 69-2714 ; *Uncompahgre, San Juan mts.,* mineral resources, 69-2945 ; *Virgin No. 3 mine, Montrose Co.,* ferroselite, 69-2620 ; *West Elk,* laccolithic cluster, 69-2476
Colorado Plateau v. Colorado
Coloradoite, *Colorado,* 59-2957
Colour, cause in charnockites, 69-3362 ; cause in tourmaline, 69-340 ; cause of smokiness in quartz, 69-3295 ; in diamonds, X-ray, UV, 69-3060 ; in fluorite, depends on inclusions, 69-2381 ; in topaz, influence of tr. elements, 69-3216 ; origin in opal, 69-335 ; *Sicily,* green of hyaloclastites, artificial, 69-3375 ; *USA,* of continental shelf sediments, 69-3508
Colquechaca v. Bolivia
Columbite, leaching of, 69-2999 ; *Bavaria,* 69-3391 ; *Western Australia,* in pegmatite, 69-877
Columbotantalite, *Rwanda,* 69-2953, 3620
Comelico, Cadore v. Italy
Comendite, *Nevada,* anal., tr. elements, 69-2816
Comenditic rocks, *Sardinia,* anal., petrography, 69-3377
Computer analysis, for RE γ spectra by least squares method, 69-70
— programme, Algol for Siemens 2002, for quantitative electron probe micro-anal. corrections, 69-64; computation of ϕ, χ and 2θ from cell parameters, 69-2886 ; construction of stereographic projections, 69-44 ; corrections for neutron and X-ray diffraction data, 69-2882 ; for calculation of chem. anal. of rocks from modal anal., 69-1842 ; for calculation of *d*-spacing, Q values and 2θ, 69-1837 ; for correlation of physical and chem. properties of minerals, 69-1843 ; for crystal structure determination, 69-2765 ; for determination of opt. and crystallographic parameters from universal stage readings, 69-1829 ; for I.B.M. 1620, for petrochemical calculations, 69-936 ; for machine plotting of liquidus data, 69-2047 ; for norm calculation on I.B.M. 1620, 69-938 ; for precession photograph intensity corrections, 69-2758 ; Fortran II for calculation of base groups and molecular norm of Niggli, 69-935 ; Fortran IV for derivation of crystal surface from contour pictures, 69-2882 ; Fortran IV for molecular norm calculation, 69-934 ; for processing X-ray texture diffractometer data, 69-1839 ; for X-ray diffraction effects by non-ideal crystals, 69-146 ; for X-ray texture-goniometry, 69-2768
Computers, XRF and emission spectrometry data processing, 69-2793
Comrie, Perthshire v. Scotland
Comstock v. Nevada
Conceição do Rio Acima quadrangle, Minas Gerais v. Brazil
Concretions, in metamorphic rocks, used to determine origin, 69-2571 ; used to determine shrinkage in coal, 69-2558 ; *Siberia,* bitumen in, 69-1321 ; *Ukrainian SSR,* siliceous in coals, origin, 69-785 ; *Yorkshire,* calcareous, tr. elements in, 69-3112
Cone-in-cone structures, *Pennsylvania,* 69-2552
Conglomerate, *California,* source of tuff clasts in, anal., 69-2548 ; *Colombia,* eclogite boulders in, 69-725; *Finland,* pyrite-cemented, 69-1669 ; *France,* bed in granite, 69-2561 ; *New York,* fluorescent, 69-2688 ; *Orange Free State,* radioactive phenomena in, 69-3438 ; *Scotland,* 69-1671, Tertiary geomagnetic field, 69-2656 ; *South Africa,* amino acids in, 69-1259
Congo, *Gakarananga, Kivu,* volcano, 69-3474 ; *Katanga,* Cu ores, origin, 69-2933 ; *Kirumba, Kivu,* carbonatite, 69-679, davidite in syenite, 69-1771 ; *Lueshe,* alkaline complex, carbonatite, 69-1771 ; *Nyiragongo,* leucite, thermal transition, 69-2051
Conichalcite, structure, 69-1085
Connecticut, *Branchville,* triploidite, 69-1081 ; *Middletown,* ages of pegmatites, 69-2715 ; *Narragansett Pier,* granite, 69-3433
Connecticut lakes v. New Hampshire
Connemara, Galway v. Ireland
Connors Pass quadrangle, White Pine Co. v. Nevada
Conoscopy, directional constant from optical indicatrix, 69-921
Conrad Hill mine, Davidson Co. v. North Carolina
Constantine v. Algeria
Contact aureole, *Urals,* zonation and pyrite deposits, 69-1999
Continental crust, petrogenesis and metabolism 69-1630 ; *Canada,* trends of evolution, 69-1552
— drift, 69-2703, 2819 ; symposium, 69-2702 ; *Africa,* palaeomagnetic evidence, 69-1787, 1788, 1789 ; *Arabia,* 69-1790 ; *Gulf of Aden,* 69-1787, 1790 ; *Ireland,* relation to base metal distribution, 69-233 ; *Red Sea,* 69-1787 ; *Somali Republic,* 69-1790
— shelf, *California,* Au in sediments, 69-2176 ; *Oregon,* Au in sediments, 69-392 ; *S.E. United States,* authigenic minerals in Tertiary sediments, 69-2551 ; *USA,* colour of sediments, 69-3508
— slope, *Gulf of Mexico,* stability of sediments, 69-3597
Continents, origin, 69-3459 ; protocontinental growth, 69-1552
Convection currents, 69-754 ; descending, high heat flow, 69-757
Conway, Caernarvonshire v. Wales
Cook Islands v. Pacific Ocean
Cooktown, Queensland v. Australia
Cooma, New South Wales v. Australia
Coorong, South Australia v. Australia
Coorongite, *South Australia,* definition, structure, 69-2187, hydrocarbons of, 69-2188
Copiapó, v. Chile
Copper, anal. by portable radioisotope XRF analyser, 69-962 ; assay, 69-60 ; determination in soils, sediments and rocks, 69-1861 ; effect on precipitation of Te, 69-1858 ; in iron meteorites, 69-2236 ; in leached zone below Kupferschie 69-1337 ; in standard rocks, 69-56 ; synthetic tourmaline, 69-340 ; in top influence on colour, 69-3216 ; in US standard rocks, 69-3160 ; metallic stone meteorites, 69-2237 ; native, revi of genesis, 69-3302 ; rapid determinati in Fe-ores by atomic absorption, 69-187 refr. ind. determination, dispersion cur absorption coefficient, 69-558 ; review distribution in basic igneous rocks a orthoamphibolites, 69-421 ; salinity in cator in clays, 69-395 ; *Alaska,* in se ments, 69-463, in serpentinite, 69-29 suggested prospecting area, 69-19 *Arizona,* 69-2223 ; *Black Sea,* in Fe- concretions, 69-3134 ; *Canada,* in pyri 69-1499 ; *Chile,* zoning in pyrite, 3322 ; *Colorado,* geochemical anoma 69-2568 ; *Cornwall,* distribution in ba hornfelses, 69-421, in hornfelses, 69-129 *Czechoslovakia,* in pyrite, 69-2144; *Euro* in Zechstein deposits, 69-415 ; *Fran* from borehole, stratigraphical profile, 1317, in shales 69-407 ; *India,* native, 2968 ; *Indian Ocean,* in sedimen 69-2174 ; *Korea,* native, in basal hydrothermal, 69-3302 ; *Massachuse* native, in beach sand, 69-2543 ; *Mas Central,* in granitic rocks, 69-65 *Morocco,* in metamorphosed limesto 69-199 ; *Nevada,* 69-265, 462, 222 *New Mexico,* 69-2228 ; *New Zealand,* waters, 69-441 ; *North Carolina,* 69-88 *Otago,* in soils, 69-464 ; *Pakistan,* covery as sulphate, 69-215 ; *Rajasth* in soils, 69-3121 ; *Romania,* in vulcanit 69-1307, in ore, 69-1261 ; *St. Kitts,* lavas, 69-724 ; *Spain,* 69-3373 ; *Taiw* in pyrite, in sediments, 69-332 *Tasmania,* review of mining, 69-295 *Taupo,* in thermal waters, 69-44 *Tunisia,* in marls and limestones, 3117 ; *Uganda,* anomalies, 69-316 *Urals,* associated with magmatism, 3392, in bituminous shales, 69-313 *USA,* in black shales, 69-2175, in sa stone, 69-3132, in sea-water, 69-220 *Utah,* distribution, 69-1120 ; *West Ota* geochemical prospecting, in soils, 69-46 *Wyoming,* in mine waste, 69-296 *Zambia,* occurrences, 69-1589
— compounds, Cu_3XS_4 type, comp., str ture, opt., d.t.a., 69-565 ; *Italy,* sulp salts, 69-2978
— minerals, *France,* 69-2979 ; *New So Wales,* at granite-hornfels junction, 792 ; *Queensland,* in volcanic roc 69-700
— ore, Au, Pd, Pt anal., 69-2808 ; *Alas* 69-260 ; *Brazil,* geochemistry, soil an 69-1265 ; *Caucasus,* distributional p terns of deposits, 69-1092, types acco ing to tectonic zone, 69-1092 ; *Ch* tectonics same age as supergene alte tion, 69-1267 ; *Germany,* 69-2970 ; *Ida* in skarn, 69-2483 ; *India,* metal genesis of sulphide, 69-2972 ; *Ita* mineralogy and paragenesis of depo 69-2013 ; *Katanga,* origin, 69-293 *Otago,* 69-213 ; *Pakistan,* exploitati 69-215 ; *Rhodesia,* origin, 69-293 *Sudbury,* origin, 69-210 ; *Transvaal,* breccia pipes, geoelectric explorati 69-214 ; *Urals,* contact metamorp deposit, 69-216 ; *Uzbek SSR,* descripti of deposit, 69-2969 ; *Western Austral* 69-211, lode in fault zone, 69-212
— -Ag-Pb-Au ore, *Western Australia,* 69-2

er *(contd.)*
u ore, *Queensland,* mineralogy, tex-
e, genesis, 69-257
i ore, *Uzbek SSR,* mineral assemblage,
ragenesis, 69-224, native Au in,
ennerite, calaverite in, 69-263
Ni ore, *Canada,* pyrite nodules in, 69-
31
Ni-Co ore, *Spain,* mineralogy, genesis,
flectivity, VHN, 69-2343
b-Zn ore, *Cumberland,* 69-2415 ;
echoslovakia, 69-248 ; *Japan,* with
rite and baryte, 69-245
permine Is., North Is. v. New Zealand
d Sea v. Pacific Ocean
lierite, cause of absorption bands,
-1033 ; equilibrium data, 69-1215 ;
e-, stability limits, 69-2108 ; magnetic
oment of Fe^{2+}, 69-858 ; polarized opt.
sorption spectra, 69-846 ; possible
unstone' of Viking saga, 69-2690 ;
aman spectrum, 69-3607 ; *Ceylon,*
-1720 ; *Colorado,* in gneiss, 69-2608 ;
lysore, in granulites, twinning in,
9-3226 ; *Portugal,* twinning and origin,
9-3225 ; *Rhodesia,* anal., 69-821 ; *Tessin*
lps, first occurrence, 69-1712
rocks, *Aberdeenshire,* anal., origin,
9-1561
anthophyllite rock, anal., statistics,
alse correlation', 69-453 ; *Ukrainian*
SR, anal., 69-521
polyamphibole rock, *Ukrainian SSR,*
etrography, paragenesis, 69-521
doba v. Argentina
ing, portable drills described, 69-940
io, Alpi Occidentali v. Italy
meilles-en-Parisis v. France
nog v. Pennsylvania
nwall v. England
rège v. France
tez quadrangle, Eureka and Lander
ounties v. Nevada
undophyllite, *Morocco,* X-ray, comp.,
enesis, 69-1461
undum, crystallization from molten
ryolite solutions, 69-1180 ; elasticity
onstant of, 69-2627 ; growth of large
rystals, 69-2058 ; kinetics of hydro-
ermal crystallization, 69-2057 ; opt.
vacuum UV, 69-2641 ; prism formation
f hydrothermal synthetic, 69-281 ;
uartz stability, 69-2100 ; shock-wave
uations, 69-2626 ; *Burma,* in river
diments, 69-2533 ; *Italian Alps,* -ande-
ne veinlets, 69-806 ; *Italy,* in xenoliths,
pt., X-ray, 69-3525 ; *Massachusetts,*
beach sand, 69-2543 ; *Ontario,* black
ar, in nepheline syenite, 69-1242 ;
urkey, from diaspore, in bauxite,
9-3528 ; *Western Australia,* localities,
9-1245
ynite, is antimonian gersdorffite, 69-
019
mic dust, accretion rate, 69-2136;
sults of 1965 collection, 69-3195
ays, comp. of heavy nuclei, 69-3174 ;
alactic, magnitude of solar modulation
n, 69-473 ; tracks in meteorites, 69-3174
na v. Romania
na valley, v. Romania
ntin peninsula v. France
s-du-Nord v. France
ian Alps v. Italy
unnite, structure refined, 69-1075
lter counter, 69-31
nter ions, distribution in hydrobiotite,
9-91
Countesthorpe, Leicestershire v. England
Co. Down v. Ireland
Coupling tensors, ^{27}Al in kyanite, determination, 69-133
Couret mine, Hautes Pyrénées v. France
Courtilles, Haute-Loire v. France
Covellite, leaching of, 69-2999 ; *France,* 69-2979 ; *India,* 69-2968 ; *Urals,* in contact metamorphic ore deposit, 69-216
Cowee valley, Macon Co. v. North Carolina
Cow Green mine, Teesdale, Durham v. England
Crandallite, *Utah,* in phosphate deposit, Sc in, 69-600
Craters, *Canada,* age, 69-2720 ; *Mauritania,* volcanic, 69-3403
Credo, Western Australia v. Australia
Crestmore v. California
Crêtes v. France
Crichtonite, *France,* X-ray, 69-3315
Crimea v. Ukrainian SSR
Crimean mts. v. Ukrainian SSR
Cristobalite, 69-1465 ; from trachyandesite, experimentally, 69-1203 ; surface state, 69-3033 ; *England,* low *T*, in Chalk, 69-109 ; *Europe,* low *T*, in Chalk, 69-109 ; *Lipari Is.,* -celadonite-tridymite paragenesis, 69-1690 ; *Moravia,* origin of vermicular texture, opt., X-ray, d.t.a., t.g.a., 69-543
Crocidolite, Fe cation distribution, 69-143 ; heat-treated, structural changes from IR, 69-522 ; *Western Australia,* structural control of distribution, 69-697
Crookesite, *Czechoslovakia,* 69-871
Crossite, *Italy,* in schist, 69-3560
— -riebeckite, *California,* anal., opt., X-ray, 69-3251
Crossitite, *Tuscany,* albite, 69-2436
Croton-on-Hudson, v. New York
Cryolite, activity product constant, 69-1194 ; crystallization of corundum from molten solutions, 69-1180 ; from nepheline, 69-1204 ; melting point, 69-301
Cryptomelane, isostructural with manjirōite, 69-2387 ; *Chile,* in ignimbrites, tuffs and sandstones, anal., 69-1512 ; *France,* 69-2985 ; *Guiana shield,* 69-230 ; *New Mexico,* concentration of Ra in, 69-1813
Crystal chemistry, book, 69-984 ; omphacite, 69-139
— diffraction, comprehensive law, 69-131
— growth, by transport reactions, 69-1176 ; conference report, 69-1171 ; foreign ion adsorption, 69-827 ; in closed and open systems, experimental arrangements, 69-1176 ; in supercooled pure melts, 69-2044 ; of quartz, effect of twin boundaries on, 69-3601 ; of KCl single crystals, 69-3029 ; of zincite, 69-3025 ; relation of growing quartz with obstacles, 69-1199 ; synthetic tourmaline, 69-340 ; *Hungary,* rate in andesite, 69-1547
Crystallization, of basaltic magmas, effects of H_2O and O pressures, 69-630
Crystallography, correction of crystallographic tables for rhombohedral carbonates, 69-1966 ; development and application of symmetry in, 69-1944 ; in humite minerals, 69-2254 ; opt., book, 69-1901 ; work in *USSR,* 69-1944, 69-1945
Crystal mt., Ravalli Co. v. Montana
Crystals, calculation of transmission factors, 69-929 ; causes of striations on, 69-1729 ; device for grinding spheres, 69-2744 ; disordered, two-dimensionally, 69-119 ; non-ideal, X-ray diffraction effects and profiles, computer programme for effects, 69-146 ; opt. device for projection of contours, 69-2882 ; spatial distribution in rocks, 69-1545 ; thermodynamic criteria for equilibrium, 69-3072
—, twin, procedure for structure solution, 69-118 ; transformation formulae, 69-117
Crystal structure, absorption corrections, single crystal diffraction, 69-127 ; accumulation function, 69-123 ; alamosite, 69-141 ; allactite, 69-192 ; amarantite, 69-2931 ; andradite, 69-1980; apatites and physical property differences, 69-184 ; apophyllite, 69-2903 ; aquacreptite, chem. anal., d.t.a., X-ray, IR, 69-149 ; atomic scattering factor as function of nuclear charge, 69-1029 ; augelite, 69-186 ; $BaAl_2O_4$, 69-174 ; bastnäsite–vaterite series, 69-2918; beryl, synthetic, hydrous and anhydrous, 69-138 ; book, 69-988 ; bornite, 69-1956 ; bournonite, 69-168 ; burbankite, 69-2919 ; calculation of ionic radii, 69-1026 ; $3CaO.\ Al_2O_3.\ CaSO_4.\ 12H_2O$, 69-1970 ; caracolite, 69-1971 ; cause of mineral colouration, 69-1735 ; chlorophoenicite, 69-191 ; chloropyromorphite group, 69-1978 ; computer programme for determination, 69-2765 ; cummingtonite, X-ray, 69-1984 ; cymrite, 69-2896, 2897 ; darapskite, 69-181 ; defect energies of CaF_2, 69-1031 ; Delaunay reduced cell, Buerger algorithm, 69-120 ; diamond, 69-2909 ; dioctahedral Al-mica 1M, 69-2900 ; disordered identified by X-ray diffuse scattering, 69-1024 ; disordered, two-dimensionally, 69-119; disorder functions, opt. analogues for anal., 69-1024 ; electron density recovery syntheses, 69-122 ; emerald, hydrous and anhydrous, 69-138 ; ettringite, 69-180, 2930 ; faujasite, Ce(III) exchanged, 69-160; fergusonite, M'phase, 69-194 ; ferrospinel, 69-2916 ; gehlenite, Al-, 69-155 ; gehlenite, Ga-, 69-155 ; gem opal by opt. diffraction, 69-154 ; germanates, 69-1975 ; glaucophane, 69-142 ; graftonite, 69-189 ; gratonite, 69-2911 ; heavy atom positions, isomorphous data, 69-124 ; heidornite, 69-1968 ; henritermiérite, 69-2890 ; heulandite, refinement, 69-159 ; HgI_2, 69-2912 ; high tridymite from Steinbach meteorite, 69-153 ; hydrosodalite, 69-158 ; illustrated by computer drawing, 69-160 ; imogolite, 69-2834, 2908 ; iowaite, 69-1965 ; kaliborite, 69-1967 ; $K_2Cr_2O_7$, 69-1972 ; kernite, 69-2921 ; laumontite, 69-1991; least-squares refinement of atomic scattering factors, 69-1027 ; least-squares refinement of equipoints, 69-1027; leucosphenite, 69-2904 ; $LiAlSi_2O_6III$, 69-1990 ; Li_4GeO_4, 69-2914 ; liroconite, 69-1976, 2928, 2929 ; lithiophorite, 69-175 ; lopezite, 69-1972; mackayite, 69-2917 ; Mg Al carbonate hydroxide tetrahydrate, 69-178, 179 ; margarosanite, 69-2892 ; matrix methods in Fourier summations, 69-126 ; mimetite, 69-1978 ; monazite, 69-1977 ; NaCl, 69-161, 162 ; $NaFeGe_2O_6$, 69-1974 ; $Na_4ZnCd[Si_2O_6]_2$, 69-1983 ; neptunite, 69-2895 ; newberyite, 69-182 ; norbergite, 69-2889 ; nosean, 69-156 ; olivine, refined by 3-dimensional least squares, 69-136 ; opt. analogues for anal. of disorder functions, 69-1024 ; osumilite,

Crystal structure *(contd.)*
69-2893 ; oxide compounds, 69-2913 ; Patterson function, electron density recovery syntheses, 69-122 ; Patterson function, heavy atoms, isomorphous data, 69-124 ; Patterson function, minimum function accumulation, 69-123 ; Patterson function, weighting function, 69-125 ; Patterson, synthesis modification, 69-1024 ; pinnoite, 69-193 ; pirssonite, 69-177 ; polynomial expression of atomic scattering factors, 69-1028 ; powellite, 69-2926 ; pyrophyllite, 69-2902 ; pyrosmalite, 69-1987 ; pyrostilpnite, 69-1958 ; Q function of disordered, 69-1024 ; *RE* borates, 69-2918 ; reflections for cell parameter determinations, 69-2883 ; rinkite, 69-1993 ; sapphirine, 69-2907 ; screw dislocations of KCl whiskers, 69-1030 ; sheet silicates, 69-2901 ; sodalite, refinement, 69-157 ; spinel, 69-2915 ; spodumene, β-, 69-140 ; $SrMoO_4$, 69-1973 ; staurolite, 69-137, 1979 ; stillwellite, 69-1982 ; sulphosalts, 69-2910 ; synthetic sanidine, high-*P*, 69-150 ; synthetic zeolite L, 69-2906 ; talc, 69-2902 ; tamarugite, 69-2927 ; teaching model, 69-1950 ; tests for isomorphism from X-ray data, 69-2888 ; tests of new syntheses for part-known structure, 69-122 ; tetrahedra models, 69-2905 ; tobermorite, 69-119 ; transformation formulae for twins, 69-117 ; triclinic crystals and Buerger precession method, 69-1022 ; twins, difficulties of solving, 69-118 ; unnamed mineral, 69-1960 ; use of new discrepancy factors in refinement, 69-1951 ; vaterite, 69-2918 ; vauxite, 69-188 ; veatchite, 69-2920 ; vinogradovite, 69-1986 ; weighting function, 69-125 ; welinite, 69-1988 ; wollastonite polymorphs, 69-2891 ; wurtzite-type, Madelung number, 69-130 ; zoisite cf. clino-, 69-1981 ; *Swiss Alps,* alkali feldspars, 69-152
Cserhát hills v. Hungary
Cuba, *Oriente,* ranciéite, 69-3320
Cubanite, Mössbauer spectra of ^{57}Fe, 69-1037 ; *Arizona,* 69-2980 ; *Bavaria,* 69-2670 ; *Portugal,* 69-2971 ; *Transvaal,* in gossan, 69-2982, X-ray, 69-2986
Cubic solids, equation of state of, 69-2622
Cuddapah basin v. India
Cufra v. Libya
Cuillins, Inverness-shire v. Scotland
Cullinan, Transvaal v. South Africa
Cumberland v. England
Cummingtonite, nomenclature of series, 69-3246 ; *Franklin,* anal., X-ray, sp.gr., opt., 69-528 ; *Italy,* structure, X-ray, 69-1984, with hornblende, opt., X-ray, anal., 69-2284 ; *Kola peninsula,* in ultrabasic rocks, anal., opt., 69-3245 ; *Labrador,* manganoan, in Fe formation, anal., 69-2279 ; *Massachusetts,* in amphibolite, anal., 69-3253 ; *Ukrainian SSR,* in cordierite-polyamphibole rock, anal., 69-521
— —grunerite series, stability, 69-2112
Cumulates, *Hawaiian Is.,* in basalts, 69-1628 ; *Western Australia,* origin, 69-1622
Cuprobismutite, *Utah,* 69-2019
Cuprosklodowskite, identification by γ-ray spectrum, 69-854
Curienite, *Gabon,* on francevillite, sp.gr., opt., anal., X-ray, d.t.a., 69-1537
Curite, identification by γ-ray spectrum, 69-854
Cussac, Haute-Loire v. France
Custer Co. v. Idaho
Cymrite, *Alaska,* structure, 69-2897 ; *Siberia,* structure, 69-2896, 2897
Cyprus, Co and Ni arsenides, 69-1531 ; *Mamonia,* volcanism, 69-3374 ; *Troodos-Kellaki,* volcanism, 69-3374
Czechoslovakia, calcites, 69-590 ; chemico-structural study of native Bi, 69-557 ; Cr in xenoliths of kimberlite pipes, 69-372 ; Cu, Co, Ni, Zn in pyrite, 69-2144 ; ore deposits, genesis and geosynclinal magmatism, 69-253 ; pyrite, 69-1264, 2144 ; *Anna Procopi mine, Příbram,* chalcopyrite, coffinite, galena, löllingite, maucherite, millerite, niccolite, pitchblende, polydymite, rammelsbergite, safflorite, silver, 69-2385, Ni-As layer structure, new mineral, 69-2385 ; *Barrandian area,* sandstones, 69-3499 ; *Bohemia,* phonolitic rocks anal., 69-2446, quartz-gabbros, 69-3454 ; *Bohutín, Bohemia,* apatite, 69-601 ; *Bohemian massif,* amphiboles in skarns, migmatization, 69-790 ; *Brno,* age of granodiorite pluton, 69-2721 ; *Černý potok,* monazite, 69-2368 ; *Erzgebirge,* Sn-W deposits, 69-1110, 1111 ; *Fichtenhübel, Slovakia,* tetrahedrite, 69-567, siderite, 69-591 ; *Hodruša,* structure of unnamed mineral, 69-1960 ; *Horní Benešov, Jeseník mts.,* pyrite, 69-247, 249, 833, pyrite-Pb-Zn ores, 69-246, pyrite polymetallic ore minerals, 69-249 ; *Horní Město,* collomorphic pyrite, 69-247 ; *Hrubý Jeseník mts.,* Cu-Pb-Zn ore, 69-248, Fe and sulphide ore genesis, 69-252 ; *Jeseník mts.,* pyrite polymetallic ores, 69-251, V in Fe ores, 69-1268 ; *Karlovy Vary,* kaolin in granite massif, 69-2859 ; *Kojice,* anal. of calcites, 69-590 ; *Kolba, Lobietová, Slovakia,* cobaltite, 69-563 ; *Köstál hill, České Středohoří,* alkaline xenoliths in breccia, 69-673 ; *Krásná Hora, Bohemia,* selenides, 69-871 ; *Lašovice, Písek,* selenides, 69-871 ; *Letovice, Moravia,* tremolite asbestos, 69-524 ; *Malé Karpaty Mountains,* axinite and pumpellyite in veins in breccias, 69-509 ; *Mirošov, Moravia,* stilbite, 69-553 ; *Moravia,* vermiform cristobalite and tridymite, 69-543 ; *Obří důl, Krkonoše mts.,* lagoriolite in skarn, 69-2258 ; *Osmosa-Bozicany, Bohemia,* kaolin, 69-2857 ; *Otov, Bohemia,* scholzite and hurlbutite, 69-608 ; *Prague,* lublinite, 69-589 ; *Příbram* anal., of calcites, 69-590 ; *Rolava creek,* monazite, 69-2368 ; *Ruprechtov,* kaolin deposits, 69-1017 ; *Sedlec,* kaolin deposits, 69-1017 ; *Sedličany, Bohemia,* selenides, 69-871 ; *Svornost mine, Jáchymov,* subsurface water, 69-3153 ; *Tábor massif,* ferromagnesian minerals, granitic and syenitic rocks, metamorphism, 69-2275 ; *Slatinka, Moravia,* stichtite, 69-593 ; *Španí Dolina, Slovakia,* tetrahedrite in ore deposit, 69-566 ; *Sušice, Bohemia,* Li-bearing pegmatite, 69-674 ; *Věžná, Moravia,* apophyllite, pectolite, serpentinite, 69-872 ; *Vrančice,* anal. of calcites, 69-590 ; *Vrbno and Šternberk-Horní Benešov belt, Jeseník mts.,* pyrite polymetallic and Fe ore relationships, 69-250 ; *West Sudeten, Bohemia,* Pb, isotopic comp. in ores, 69-243 ; *Zlaté Hory, Jeseník mts.,* Au, 69-1380, collomorphic pyrite, 69-247, V in Fe ores, 69-1268 ; *Zulová Haspelberk,* metamict fergusonite, 69-583
Dacite, chem. anal. study, 69-313 experimental melting, 69-1218 ; orig 69-3354 ; *Iceland,* in complex dy geochemistry, 69-2500 ; *Mediterran Sea,* andesitic volcano, anal., 69-218 *New Zealand,* petrography, 69-705
Dadu v. Romania
Dafni v. Greece
Dagestan v. Russian SFSR
Dahllite, (carbonate-apatite), effect of he X-ray, IR, 69-603 ; IR, 69-84 structure, IR, 69-183 ; synthetic, parameters, IR spectra, 69-851 ; *C fornia,* in phosphate rock, 69-2542
Daisy Geyser group, Yellowstone Natio Park v. Wyoming
Dalarna v. Sweden
Dalima v. India
Daltonganj coalfield v. India
Damaraland, South-West Africa v. So Africa
Danalite, *USSR,* in metasomatites, 1139
Darapskite, structure, 69-181 ; *Ross Shelf,* in soils, 69-411
Darfour v. Sudan
Darjeeling v. India
Darjeeling Himalayas v. India
Dartmoor, Devon v. England
Datolite, *Greater Caucasus,* with cinnab opt., X-ray, 69-2353
Daubréelite, in iron meteorites, 69-2247
Daun, Eifel v. Germany
Davidite, structural relationship w senaite and magnetoplumbite, 69-17 *Congo,* non-metamict, 69-1771
Davidson Co. v. North Carolina
Davis creek, South Is. v. New Zealand
Davos v. Switzerland
Davyne, synthesis, 69-1227 ; *Vesuv* X-ray, anal., 69-617
Dawsonite, *Italy,* genesis, 69-2667 ; *M treal,* in dyke, petrology, origin, 69-15 structure, 69-1073 ; *Quebec,* 69-17 *Tunisia,* genesis, 69-2667
Dean quarry, Cornwall v. England
Death valley v. California
Dedolomitization, and calcian dolom 69-783
Dehu, Poona v. India
Dehydration diagrams, attapulgite chlorite mixtures, 69-1904
Dehydroxylation, of sericite, 69-84
De Kalb, St. Lawrence Co. v. New York
Delafossite, *Chile,* in mine, 69-3628
Delegate, New South Wales v. Australia
Dellaite, in system $CaO–SiO_2–C_2–H$ 69-3045
Demu, Bihar v. India
Denmark, *Bornholm,* geochemistry kaolin deposit, 69-408 ; rock density mineral content, 69-2624 ; *Rønne,* gra diorite, 69-1017, kaolin deposits, ma element distribution, 69-1017
Density, determinations, 69-2750 ; de mination of rock powder, 69-2752 ; mineral powders, 69-26 ; zero-press of the high *T* and *P* phases of rocks minerals, 69-2626 ; *Kazakh SSR,* quartz of different origins, 69-3293
Derbyshire v. England
Desborough, Leicestershire v. England
Descloizite, structure, 69-1085
Desert varnish, *California* and *Nev* minor element variation, 69-2184
Desourdy quarry, Quebec v. Canada
Despujolsite, *Morocco,* anal., X-ray, sp. opt., isomorphous with schaurteite, 621

iteric alteration, *South Africa,* in orphyry, 69-3534
tterium, in water of crystallization of ypsum, 69-3152 ; in water of volcanic prings, 69-437 ; *Atlantic Ocean,* 69-437 ; *Kazakhstan,* in natural waters, 69-430 ; *Kilauea,* in pumice, 69-1664 ; *Lake Baikal,* 9-437 ; *Surtsey,* in volcanic gas, anal., 9-759 ; *Ukraine,* in natural waters, 9-430 ; *USSR,* distribution in waters, 9-456
ux-Sevres v. France
vi, Dhura, Uttar Pradesh v. India
villite, chem., opt., X-ray, 69-3336
von v. England
w, analytical data, 69-1352 ; *Jerusalem,* omp., 69-444
windite, identification by γ-ray pectrum, 69-854
anbad, Bihar v. India
armsala v. India
auladhar range, Dharmsala v. India
abase, As content, 69-2162 ; salt from weathering, 69-2208 ; *Arizona,* U deposits near, 69-2980 ; *Armenian SSR,* porphyry dykes, banding in, anal., 69-3447 ; *Brazil,* 69-2946 ; *New Jersey,* age, 69-3458 ; *Ontario,* sill, petrology, anal., 69-2466 ; *Pennsylvania,* magmatic differentiation, magnetic properties, 69-1556 ; *Siberia,* age of dykes, 69-2000 ; *Siberian platform,* anal., age, petrography, 69-2458 ; *Switzerland,* types, 69-3371 ; *Tenerife,* olivine, petrography, 69-1571 ; *Urals,* origin by metamorphism of basalt, 69-2566 ; *Volga-Ural,* age, 69-20
-granophyre suite, *Pennsylvania,* variation in tr. elements, 69-382 ; *Tasmania,* variation in tr. elements, 69-382
adochite, IR, 69-2638
agenesis, and metamorphism, chemical stability in border zone, 69-803 ; application of mineral facies concept, 69-3515 ; dedolomitization, 69-783 ; distinction from weathering, 69-3515 ; implications of irreversibility, 69-3071 ; of carbonates by organisms, 69-3514 ; retexturing of sediments, 69-3516 ; *Arkansas,* in oolitic limestones, 69-784 ; *Carpathians,* of limestone, 69-3513 ; *France,* clay minerals as indicators, 69-113 ; *Italy,* in evaporitic environment, 69-3520 ; *Lipari Is.,* of volcanic products, 69-3518 ; *Oklahoma,* in oolitic limestones, 69-784
amantina v. Brazil
amond, anomalous X-ray reflections, 69-2909 ; birefringence, evolution history, 69-3303 ; brilliant-cut, opt., 69-327 ; pyrope inclusion in, 69-504 ; coloured, spectroscopy, X-ray, UV, electroconductivity, stereomicroscopy, 69-3060 ; cut, identification by goniometry, 69-3057 ; elasto-optical constants, 69-847 ; gems from Soviet Union's fund, 69-326 ; grading with proportionscope, 69-329 ; history of design, 69-328 ; inclusions in synthetic, 69-2909 ; in interstellar dust, 69-2709 ; interaction with Si, 69-2055 ; micromorphology in twins, 69-828 ; piezo-optical constants, 69-847 ; possible isotope effects during crystallization, 69-1158 ; structure, 69-2909 ; synthetic crystal growth, 69-1171 ; the Dresden or the Saxon, description, 69-325 ; variation of refr. ind. with hydrostatic pressure, 69-847, 3603 ; *Ghana,* inclusions in, X-ray, 69-3061 ; *India,* ultra-flat brilliant cut, 69-1240 ; *Russian SFSR,* possible deposits, 69-272 ; *Siberia,* crystal fragmentation in, 69-3059, from kimberlite, rutile intergrowth, 69-560 ; *Siberian platform,* physical properties, 69-3059 ; *Sierra Leone,* inclusions in, X-ray, 69-3061 ; *South Africa,* green, type I, absorption spectrum, 69-3058, inclusions in, X-ray, 69-3061 ; *South America,* alluvial mining problems, 69-330 ; *South-West Africa,* beach placer mining, 69-271 ; *Western Australia,* localities, 69-1245 ; *Yakutia,* in eclogite, UV, IR, e.p.r., photo-fluorescence, X-ray, origin, 69-2328, physical properties, 69-3059, X-ray diffraction topography, 69-3304
— dredge, *Brazil,* 69-331
— mining, *Brazil,* geology of deposits, 69-332
Diaspore, effect of Fe on lattice, IR, 69-587 ; synthesis, 69-2059 ; *France,* in bauxite, t.g.a., d.t.a., X-ray, IR, 69-2516 ; *Morocco,* with pyrophyllite, X-ray, 69-1769 ; *Turkey,* corundum from, in bauxite, 69-3528
Diatomite, pore structure, 69-834 ; porosity, 69-2528
Dickite, O–H stretching vibrations, IR, X-ray, 69-2844 ; *Kansas,* in limestone and sandstone, 69-1923 ; *Switzerland,* 69-1013 ; *Ukrainian SSR,* anal., d.t.a., t.g.a., 69-1012
Die, Hautes-Alpes v. France
Dielectric properties, of hydroxyapatite, 69-849, 850 ; of synthetic chlorapatite, 69-852
Differential thermal analysis, for discrimination of pyrite and organic matter, 69-1841 ; high-sensitivity apparatus, 69-43 ; in vacuum and controlled atmospheres, 69-939 ; of alkaline earth metal oxalates, 69-939 ; of allophane, 69-2851 ; of clays, combined with d.t.g. and t.g.a., 69-989 ; peak area calculator, 69-2771 ; study of surface layers of silicates, 69-836
— thermogravimetry, of clays, combined with d.t.a. and t.g.a., 69-989
Differentiation, *Siberia,* gravitational, of sill, 69-1619
Diffraction, in crystals, comprehensive law, 69-131
Diffusion, solid, geological aspects, 69-1546
Digenite, structure, 69-1956 ; *New Brunswick,* In in, 69-2146
Dillsburg v. Pennsylvania
Diopside, B indicator in Mg skarns, 69-3084 ; equilibrium data, 69-1216 ; from pumpellyite, 69-1213 ; inclusions in diamond, X-ray, 69-3061 ; plastic deformation, 69-1739 ; production from gel, 69-2045 ; synthesis, lowest formation *T,* 69-304 ; titaniferous, synthetic, substitution of Si by Ti, 69-2117 ; *France,* chrome-, in peridotite xenoliths, anal., 69-3524 ; *Murcia,* in volcanics, comp., opt., 69-514 ; *Quebec,* chromian, X-ray, unit cell, refr. ind., anal., sp.gr., 69-878 ; *Romania,* chromiferous, refr. ind., anal., 69-1439 ; *Siberia,* at dolomite marble and silicate rocks contact, 69-794; *Yakutia,* chrome, absorption spectrum, 69-2644
Dioptase, Raman spectrum, 69-3607
Diorite, average Au in, 69-3102 ; heat of cooling and crystallization, 69-1744 ; *California,* anal., hornblende in, 69-2281, intrusive, age, anal., 69-3434 ; *Colorado,* in ring complex, anal., age, 69-3451 ; *France,* in basement complex, facies variations, 69-654, origin, 69-2422 ; *Germany,* anal., XRF, UV, 69-3099 ; *Italy,* anal., 69-3382 ; *New Zealand,* stock, petrology, anal., 69-704 ; *South China Sea,* anal., petrography, 69-1599 ; *Wyoming,* in ring complex, anal., age, 69-3451
—, quartz, *Antarctica,* age, 69-1800 ; *Germany,* anal., XRF, UV, 69-3099 ; *Oregon,* anal., 69-2473
Dioritic rocks, *Germany,* geochemistry, genesis, 69-3099
Di Rubbo mine, Croton-on-Hudson v. New York
Discrepancy factors, use of new types in crystal structure refinement, 69-1951
Ditrau v. Romania
Dixenite, structure, 69-1082
Djebel Nader, Constantine v. Algeria
Dnieper district v. Ukrainian SSR
Dniester region v. USSR
Dodger Mine, British Colombia v. Canada
Doierite, shock-wave equations, 69-2626 ; *Andhra Pradesh,* differentiated dyke, anal., 69-3624 ; *Antarctica,* dyke swarm, petrology, age, 69-902 ; *England,* alkaline, age, 69-910, n.r.m., 69-860, thermomagnetic and X-ray anal., 69-1755 ; *Guinea,* weathering, 69-2875 ; *India,* petrography, anal., 69-692 ; *Norway,* magnetism and origin, 69-863 ; *Outer Hebrides,* dyke, anal., 69-3363 ; *Rhodesia,* regional metamorphism, 69-3572 ; *Scotland,* alkaline, 69-3364 ; *Siberia,* age, 69-2733 ; *Sweden,* 69-2411, geology, anal., 69-2410
—, quartz, *Lake District,* 69-2415; *Scotland,* Permo-Carboniferous, 69-3364
— -adamellite hybrid, *New South Wales,* 69-1645
Dolomite, calcian, and dedolomitization, 69-783 ; Ca-Fe-Mn, genesis, anal., X-ray, 69-1517 ; crystal defects, X-ray, 69-3600 ; determination of CO_2 by acid-base titration, 69-945 ; Fe-bearing, opt., 69-924 ; formation in sediments, 69-2513 ; hemihedral twin misorientation, X-ray, 69-3600 ; in formation of skarn ore deposits, 69-206; join, $CaMg(CO_3)_2$–$CaFe(CO_3)_2$–$CaMn(CO_3)_2$, 69-298 ; metamorphosed siliceous, talc and tremolite in, 69-1212 ; progressive metamorphism of, 69-2572 ; rapid determination of SiO_2 using gelatin, 69-950 ; solubility in ground-water, 69-2076 ; structure report, misprint corrected, 69-1966 ; thermodynamic criteria for equilibrium in, 69-3072 ; *Assynt,* 69-1646 ; *Brazil,* resources, 69-2946 ; *California,* in evaporites, 69-1324, spheroidal weathering of, 69-1698 ; *Germany,* 69-2993 ; *India,* formation of talc in, 69-3536 ; *Ireland,* Pb-Zn-Ag ores in, 69-2005 ; *New York,* 69-2682 ; *Poland,* bentonite in, 69-1006 ; *Rhodesia,* amino acids in, 69-1259 ; *South Australia,* isotopic comp., formation of, 69-416 ; *South Dakota,* calcitization, 69-2540 ; *Spain,* 69-812 ; *Switzerland,* sulphide and sulphate paragenesis in, 69-1272 ; *Turkey,* Recent, 69-1768 ; *USA,* in continental shelf sediments, X-ray, 69-2551 ; *Uzbek SSR,* in sediments, 69-2529 ; *Wyoming,* calcitization, 69-2540
— marble, *Siberia,* 69-794 ; *Vermont,* 69-1246
Dolomites v. Italy
Dolomitic rocks, *Iowa,* rich in phosphate, 69-1148 ; *Western Australia,* stylolites in limestone, 69-768

Dolomitization, theoretical fractionation of Mg and Ca isotopes, 69-417 ; *Canary Is.*, of biocalcarenites, 69-2513
Dolostones, *Italy*, Sr in, 69-3116
Dome mt., Timber mt. caldera v. Nevada
Domodossola v. Italy
Donbas v. Ukrainian SSR
Donbassite, *USSR*, structure, 69-1050
Donegal v. Ireland
Donets basin v. Ukrainian SSR
Doniphan Co. v. Kansas
Dora Maira v. Italy
Dorfer Keesfleck, Venediger v. Austria
Dorgali, Sardinia v. Italy
Dorset v. England
Doss Capello, Predazzo v. Italy
Dosulite, *Japan*, 69-1096
Douala v. Cameroon
Douala basin v. Cameroon
Drammen, Oslo v. Norway
Dravite, synthesis, sp.gr., opt., X-ray, 69-2127 ; *Transbaikal*, origin of, anal., 69-511
Drilling, portable drills described, 69-940
Drôme v. France
Drum mts., Juab Co. v. Utah
Dublabera v. India
Dubuque v. Iowa
Dufrenoysite, structure, 69-167 ; *Lengenbach*, anal., 69-2352
Duluth v. Minnesota
Dumortierite, *Rajasthan*, in quartzites, anal., opt., X-ray, 69-3623
Dundas, Ontario v. Canada
Dundas quarry, Ontario v. Canada
Dundasite, *Tasmania*, anal., 69-1520
Dundonald Township, Ontario v. Canada
Dunedin, South Is. v. New Zealand
Dunite, average Au in, 69-3102 ; deformational characteristics, 69-1741 ; major constituent of lower mantle, 69-2408 ; olivine texture in, 69-2488 ; shock-wave equations, 69-2626 ; *Azerbaijan*, geochemistry of Ni and Co, 69-373 ; *Brazil*, pre-metamorphism, 69-2486 ; *California*, anal., 69-3202 ; *Spain*, anal., 69-1572
— -chromite ores, Au, Pt, Pd analysis, 69-2808
— -harzburgite, *Ural Mts.*, structure systems, 69-2493
Durance river basin, Hautes-Alpes, v. France
Durango v. Mexico
Durham v. England
Dust, *Barbados*, airborne, 69-1554
Dwars river, Transvaal v. South Africa
Dyebel Hamra v. Tunisia
Dyke rocks, *Andhra Pradesh*, differentiated dolerite, anal., 69-3624 ; *Antarctica*, dolerite, petrology, age, 69-902, petrology, anal., 69-712 ; *California*, anal., 69-2406 ; *Colorado*, age, 69-2713, 2714 ; *Donegal*, dolerite, petrology, 69-643 ; *Germany*, lamprophyre, anal., 69-672 ; *Greenland*, microsyenite, mineralogy and petrology, 69-634 ; *Iceland*, complex, anal., geochemistry, petrography, 69-2500 ; *India*, petrography, anal., 69-692 ; *Ireland*, dolerite, mineralogy, structure, crystallization in, 69-642 ; *Newfoundland*, As in altered basic, 69-1133 ; *New South Wales*, geology of, 69-701 ; *Norway*, dolerite, magnetism and origin, 69-863 ; *Outer Hebrides*, metadolerites, 69-1707 ; *Pitcairn Is.*, petrography, 69-715 ; *Romania*, camptonite, 69-1716 ; *St. Helena*, variation, 69-1588 ; *Sardinia*, melanocratic, petrography, genesis, 69-3378, petrography, 69-1640 ; *Scotland*, Tertiary geomagnetic field, 69-2656 ; *Siberia*, age, 69-2000, Be content, 69-360 ; *Skye*, xenolithic ultrabasic, petrography, anal., origin, 69-2414 ; *Spain*, albite, 69-789, in ultramafic complex, anal., 69-1572 ; *Washington*, age, 69-2718
Dykes, origin of 'relict', 69-3445 ; *Bihar*, clastic in coal, origin, 69-3505 ; *India*, composite, granophyric texture, 69-3446, pebble, 'tuffsites' in, 69-3580; *Queensland*, pebble, by fluidization, 69-255 ; *Sardinia*, 69-1125
Dyscrasite, *Ontario*, in Ni-Co-Ag ore complex, 69-209
Dysprosium, determination in rocks by neutron activation, 69-69 ; determination in Th compounds from monazite, 69-970 ; neutron activation anal. of chromatogram, 69-70 ; separation by chromatography, 69-70 ; *New Zealand*, in stream sediments, 69-397
Dzalanyama v. Malawi
Dzhail'ma trough v. Kazakh SSR
Dzhezkazgan v. Kazakh SSR
Dzhida, Siberia, v. Russian SFSR
Dzirula v. Georgian SSR

Earth, geochemical background dispersions of elements in silicate shell, 69-3079 ; mass accretion rate of interplanetary matter, 69-1319 ; rotation of, symposium, 69-2702 ; Si in core, 69-3190 ; solar origin favoured, 69-3459
— materials, effects of waste effluent on plasticity, 69-2854
Earthquakes, mantle, cause, 69-1555 ; *Kamchatka*, volcanic, 69-1654, 3477 ; *Sudan*, associated faulting, 69-1791
Earth sciences, collected reprints, 69-2820
Earth's crust, Au in, 69-2231 ; boundary with upper mantle, 69-2704 ; confirmation of continual evolution hypothesis, 69-3142 ; evolution of C, 69-343 ; evolution of Pb isotopes, 69-345 ; history, symposium, 69-2819 ; independent source of magma, age, 69-3459 ; origin and evolution, 69-1795 ; petrogenesis and metabolism of continental rocks, 69-1630 ; relation to upper mantle thermal history, 69-1551 ; Sc abundance, 69-2160; *Hawaii*, thicknesses of layers, 69-1667 ; *Hawaiian Is.*, petrography, seismic data, 69-1628 ; *Italy*, outcrop of crust/mantle transition, 69-1742 ; *Kamchatka*, continental, comp., 69-3476
— magnetic field, effect of variations on radiocarbon dating, 69-916
— mantle, cause of seismic anisotropy, 69-1740 ; contraction, 69-1793 ; convection, 69-1794 ; diffusivity of elements in upper, 69-1251 ; dunite major constituent in lower, 69-2408 ; earthquakes in, 69-1555 ; FeO in lower, 69-2408 ; geochemical differentiation in upper, 69-1251 ; graphical representation of convection, 69-896 ; hollandite structure feldspars probable, 69-150 ; independent source of magma, 69-3459 ; model structure for silicates at depth, 69-171 ; movements related to volcanic eruption, 69-1654 ; origin of calc-alkaline rocks in upper, 69-1218 ; origin of S in hydrothermal sulphides, 69-458 ; outgassing of Ar isotopes, 69-448 ; Pb isotopes, 69-2707 ; plastic deformation of silicate minerals of, 69-1739 ; shock wave data for lower, 69-2408 ; 2 sources of C in, 69-343 ; viscosity, 69-2819 ; water pressure in upper, 69-1217 ; zoning of parent magmas, 69-1550 ; *Hawaiian Is.*, orig
of tholeiitic magma, seismic da
69-1628 ; *Italy*, outcrop of crust/man
transition, 69-1742 ; *Pacific Ocean*, co
vection and sea-floor spreading, 69-89
Siberia, structure, 69-1649
Easter Is. v. Pacific Ocean
Eastern Ghats, Andhra Pradesh v. India
Eastern Townships, Quebec v. Canada
East Pacific Rise v. Pacific Ocean
East Pakistan v. Pakistan
East Tintic v. Utah
East Wheal Falmouth mine, Cornwall, England
East Wheal Jane mine, Cornwall v. Engla
Ebeko volcano, Soviet Far East v. Russi SFSR
Echassières massif, Massif Central France
Eclogite, 69-630 ; amphibolitization, 6
816 ; associated with granulite, 69-802
–basalt transformation, 69-2115 ; di
mond-bearing, anal., mineralogy, 6
1648 ; differentiation of, 69-816 ; quar
from basalt, 69-1218 ; shock-wave equ
tions, 69-2626 ; tr. element data, 6
2168 ; *Arizona*, inclusions in kimberli
pipes, 69-3590 ; *Colombia*, in congl
merate, origin, anal., 69-725; *Germa*
mineralogy, crystallization condition
69-3239 ; *Japan*, crystallization *T*, 6
3426 ; *Kazakh SSR*, quartz density i
69-3293 ; *Norway*, error in age, 69-272
Pamirs, from fergusite-porphyry pip
69-3568, xenoliths in alkaline roc
anal., 69-3568 ; *Poland*, anal., opt. origi
69-815 ; *Scotland*, nepheline normati
anal., 69-1705 ; *South Africa*, in kimbe
lite, anal., origin, 69-681, kyani
partially melted in kimberlite, 69-259
xenolith in kimberlite, secondary alter
tion, 69-680 ; *Spain*, from gabbr
69-2424 ; *Ural mts.*, anal., 69-817
— facies, 69-816
Eclogitization, *Ural mts.*, 69-817
Economic minerals, *India*, book, 69-1899
Ectinite, *France*, age determination, 6
907 ; *Massif Central*, geochemistry, ana
69-3549
Egan Chute, Ontario v. Canada
Eganville, Ontario v. Canada
Egersund v. Norway
Egypt, serpentinites, 69-3405; tal
carbonate rocks, 69-3405; *Aswan*, micr
cline, 69-1469 ; *Rosetta, Nile Delt*
ilmenite, 69-3314
Eh, determination of quartz suspension
69-925 ; of equilibrium, between aqu
ous solutions and rocks and mineral
69-451
Eibenstock v. Germany
Eichbüchl v. Austria
Eifel v. Germany
Eights coast v. Antarctic
Eivolden, Tysfjord v. Norway
Eire v. Ireland
Ekanite, structure, 69-1044
Ekerite, *Norway*, Rb-Sr isotopic studie
69-2727
— -nordmarkite, *Norway*, Rb-Sr isotop
studies, 69-2727
Elasto-optical constants, of diamond, 6
847
Elba v. Italy
Elbaite, synthesis, sp.gr., opt., X-ra
69-2127
Electrical conductivity, determination f
framework silicates, 69-855 ; in natur

trical conductivity *(contd.)*
d synthetic quartz, 69-3613 ; of glasses, 3612 ; of obsidian, anal., 69-856
easurements, *Nevada*, 69-1386
tron microprobe *v.* electron probe
icroscopy, 69-41 ; of chrysotile asbestos, -529 ; of clay minerals, 69-993 ; of fine-ained rocks, 69-932 ; of limestones, book, -2817 ; of sphalerite, 69-2093 ; of surface plicas of carbonate rocks, 69-1827 ; view of limestone studies, 69-2513 ; anning, use in geological studies, 69-3 ; use in ceramics, clay anal. and rticle size anal., 69-990 ; *California*, of nestones, 69-2546
aramagnetic resonance, of pink calcite, -853 ; of Ti^{3+} ions, 69-147 ; of zircons, -857
robe, anal. of glass discs for XRF, -961 ; determination of S co-ordination minerals, 69-551 ; preparation of ores, -28 ; preparation of rock thin sections, -29
— microanalysis, automatic searching nit, 69-963 ; compositional changes in etzite during, 69-1883 ; correction pro-edures for quantitative work, 69-64 ; rrections, complete Algol programme r Siemens 2002 computer, 69-64 ; f rock-forming minerals, 69-2801 ; of in presence of Ti, 69-2800 ; preparation f polished thin sections for, 69-1826 ; mall-particle anal., 69-2798 ; use of anning electron beam anomalous trans-ission patterns, 69-1838
ments, classification on geochemical ackground dispersion, 69-3079 ; fre-uency distribution of concentration in iotites, ferromag. minerals and soils, -3074 ; geochemical classification, 69-139
Hamman mine v. Morocco
Ness, Fife v. Scotland
o Co. v. Nevada
Pungo, Córdoba v. Argentina
ans, origin, 69-1564 ; *Cornwall*, petro-raphy, anal., origin, 69-1564
v. Nevada
brechites, *Italy*, 69-2588 ; *Massif Cen-al*, 69-3553
erald, Cr-free, absorption spectra, 69-13 ; from Soviet Union's fund, 69-326 ; ydrous and anhydrous, structural refine-ent, 69-138 ; synthetic, Lechleitner ethod, 69-1241 ; synthetic, sp.gr., opt., uggested trapiche, 69-322 ; *Colombia*, nclusions in, 69-3064 ; *Rajasthan*, in hist, origin, 69-3063 ; *Western Australia*, calities, 69-1245
ery, *New York*, 69-881
ission spectrography *v.* spectrography, mission
monsite, *Moctezuma*, 69-2396
plectite, *Uzbek SSR*, 69-224
pressite, 2 phases, 69-1497 ; *Colorado*, -2957
rgite, *Lengenbach*, anal., 69-2352 ; *witzerland*, with tetrahedrite, 69-2668 ; *aiwan*, anal., X-ray, geochemistry, -1496
ruzilhada do Sul, Rio Grande do Sul v. Brazil
derbites, *Ukrainian SSR*, identical with ose of Enderby Land and southern ndia, 69-2592
derby Land v. Antarctica
rgy, method of calculation for silicate recipitation, 69-1252
ENGLAND, granitic rocks, F and Cl in, 69-1283 ; mineralization and basement, 69-1100 ; minerals identified in Lower Chalk, 69-109 ; montmorillonite, in Chalk, origin, review of hypotheses, 69-109 ; O isotope ratio in baryte, 69-419 ; saline ground-waters, 69-3143 ; structures in London Clay, 69-3492 ; *East Midlands*, age of alkaline dolerite, 69-910 ; *English Channel*, solubility of $BaSO_4$ in sea-water, 69-426 ; *Great Whin sill*, dolerite, 69-1755, n.r.m. of dolerite, 69-860 ; *Hampshire basin*, clay mineral provinces, 69-112 ; *Lake District*, geology, 69-2415 ; *Pennine orefield*, rare earths in fluorites, 69-571 ; *Pennines*, ore mineralization, 69-3163, Pb and Zn mineralization, 69-1099, water flow-through time in limestones, 69-436 ; *Severn valley*, geology, 69-1676 ; *south-east*, glauconite, 69-1925 ; *southern*, clays, fuller's earth, glauconite, 69-1677 ; *south-west*, ages of slates and phyllites, tectonics, metamorphism, 69-3547, Cl and F in granites, 69-3095, Cl in tourmaline, 69-2270, K-feldspar in granites, 69-1634 ; *Weald*, geology, 69-1674
—, CORNWALL, distribution of SiO_2, Na, K, Li, Fe and Mg in granitic rocks, 69-359; liroconite structure, 69-2928, 2929; mineralogy, book, 69-1895, 1900; minerals, collectors guide, 69-1900 ; *Bosahan quarry*, *Carnmenellis*, biotite weathering, 69-2295 ; *Dean quarry*, *Lizard*, zeolites, 69-2666 ; *East Wheal Falmouth mine*, in lease area of new Sn mine, 69-2951 ; *East Wheal Jane mine*, in lease area of new Sn mine, 69-2951 ; *Falmouth Consolidated mine*, in lease area of new Sn mine, 69-2951 ; *Godolphin*, geochemistry of granite, 69-359 ; *Land's End*, Cu in hornfelses, 69-421, 1297, feldspar megacrysts, 69-1565, Pb and Sn in aureole, 69-1296 ; *Nangiles mine*, in lease area of new Sn mine, 69-2951 ; *North Wheal Jane mine*, in lease area of new Sn mine, 69-2951 ; *Praa Sands*, elvan, 69-1564 ; *St. Agnes*, exploration for ore bodies, 69-1384 ; *St. Austell*, granite geochemistry, 69-359 ; *St. Day*, exploration for ore bodies, 69-1384 ; *Sandinway beach*, igneous breccia, 69-641 ; *Seven Stones*, granite, 69-3365 ; *South Crofty mine*, cassiterite distribution, 69-2950, exploration for ore bodies, 69-1384 ; *Stenna Gwyn mine*, *St. Austell*, tavistockite, wavellite, 69-2372 ; *The Janes mine*, new Sn mine, 69-2951 ; *Treamble*, kaolinite, 69-1016 ; *Tregonning*, geochemistry of granite, 69-359 ; *Tremearne*, *Porthleven*, banding in granitic rocks, 69-3457 ; *West Wheal Jane mine*, in lease area of new Sn mine, 69-2951 ; *Wheal Badden*, in lease area of new Sn mine, 69-2951 ; *Wheal Falmouth mine*, in lease area of new Sn mine, 69-2951 ; *Wheal Hope mine*, in lease area of new Sn mine, 69-2951 ; *Wheal Jane mine*, in lease area of new Sn mine, 69-2951 ; *Wheal Sperries mine*, in lease area of new Sn mine, 69-2951 ; *Wheal Widden mine*, in lease area of new Sn mine, 69-2951
—, CUMBERLAND, *Caldbeck*, geology of country around, 69-2415 ; *Carrock Fell*, intrusive complex, 69-2415 ; *Cockermouth*, geology of country around, 69-2415, gypsum, limestone, 69-891 ; *Grainsgill*, scheelite, wolframite, 69-2415 ; *Potts Ghyll*, baryte, 69-2415 ; *Roughton Gill*, Pb-Cu-Zn mineralization, 69-2415, pyromorphite, 69-604
—, DERBYSHIRE, brine and Pb-Zn mineralization, 69-1143 ; K-bentonites, 69-1927 ; Mo in stream sediments, 69-3162 ; ore mineralization, 69-3163 ; sand pockets in Carb. limestone, 69-2515 ; *Ashford-in-the-water*, rottenstone, 69-772 ; *Bakewell*, rottenstone, 69-772 ; *Peak District*, Pb mining, book, 69-2818 ; *Treak Cliff*, Blue john fluorite, 69-3616, Blue John, hydrocarbons, uraniferous collophane, 69-3615 ; *Windy Knoll*, *Castleton*, hydrocarbons, 69-3093
—, DEVON, distribution of SiO_2, Na K, Li, Fe and Mg in granitic rocks, 69-359 ; kaolinites, IR, relationships and origins, 69-2824 ; lavas, 69-1566 ; mineralization, 69-1566 ; mineralogy, book, 69-1895, 1900 ; minerals, collector's guide, 69-1900 ; magnetism, 69-2657 ; *Dartmoor*, granite, 69-1566, granite emplacement, 69-733, magnetism due to pyrrhotite, 69-866 ; *George and Charlotte mine*, *Tavistock*, carbonation apatite, tavistockite, 69-2372 ; *Meldon*, amblygonite, 69-3341, axinite, 69-1433, montebrasite, 69-3341 ; *Okehampton*, geology of the country around, 69-1566 ; *Petrockstow basin*, ball clays, 69-1011
—, DORSET, *Swanage*, lithographic limestone, 69-2517
—, DURHAM, *Cow Green mine*, *Teesdale*, baryte, 69-1076 ; *Rookhope*, granite in borehole, 69-1563 ; *Weardale*, granite, 69-1563
—, LANCASHIRE, soils, 69-116
—, LEICESTERSHIRE, anhydrite, 69-1143 ; *Counteslhorpe*, granite, 69-1673 ; *Desborough*, ironstone, 69-1673 ; *Market Harborough*, geology of country around, 69-1673 ; *Orton*, welded tuff, 69-1673 ; *Oxendon Hall*, welded tuff, 69-1673 ; *Tickow mine*, *Blackbrook*, Pb ore, 69-2665
—, NORFOLK, *Mundford*, Chalk from boreholes, 69-1672
—, NOTTINGHAMSHIRE, *Mansfield*, galena in limestone, 69-2023
—, SHROPSHIRE, *Welsh Borderland*, geology of, 69-640
—, STAFFORDSHIRE, K-bentonites, 69-1927 ; Mo in stream sediments, 69-3162
—, SURREY, *Haslemere*, geology of country around, 69-1674
—, SUSSEX, geology, 69-1674
—, WESTMORLAND, *Silverband mine*, baryte, 69-2615
—, YORKSHIRE, Carboniferous sediments, 69-3111 ; pyritic shales, 69-3112 ; *Closehouse*, *Lunedale*, barytes, 69-1142 ; *East*, gibbsite, 69-1759 ; *Ingleton*, *Skirworth quarry*, kersantite dyke, 69-639 ; *Skipton*, argillaceous rocks, X-ray, 69-2871, melanterite, 69-2871
English Channel v. England
Enisei Range, Siberia v. Russian SFSR
Enkenberg hills v. Germany
Enstatite, -anorthite reactions, 69-2115 ; energy for formation, 69-1252 ; H and He ion implantation, 69-1373 ; inclusions in diamonds, X-ray, 69-3061 ; plastic deformation, 69-1739 ; reaction with MgO to form forsterite, 69-1169 ; *Norway*, deformation of, 69-1398 ; *Rhodesia*, associated with kyanite, anal., 69-821
Enthalpy, rapid determination of change in, 69-1174

Entropy, in semi-closed and thermally open systems, 69-3075 ; rapid determination of change in, 69-1174
Eon, 10^9 yrs., proposed term, 69-886
Eosphorite, IR, 69-2638
Epidiorite, *New South Wales*, dykes, geology of, 69-701
Epidote, dissociation in NaCl solutions, 69-1206 ; *British Columbia*, Sn in, 69-2260 ; *California*, from cores, anal., 69-2267 ; *Iceland*, in geothermal drill holes, 69-2211, in hot spring systems, 69-2212 ; *Japan*, coexisting with hedenbergite in skarn, anal., opt., 69-2277 ; *Kamchatka*, in hot spring systems, 69-2212 ; *New South Wales*, in metamorphosed volcanic greywackes, 69-779 ; *New Zealand*, in hot spring systems, 69-2212 ; *Skye*, anal., 69-1706 ; *Spain*, in gneissic rock series, 69-3218
Epidotic rock, *Spain*, genesis, 69-3218
Epidotites, *Switzerland*, petrography, 69-2590
Epigenesis, *Tadzhik*, zoning in Cretaceous rocks, 69-2560
Epitaxy, polyethylene on quartz, 69-1953
Epsomite, causes of predominance of left-handed forms, 69-2616 ; *Ontario*, 69-1773 ; *Ross Ice Shelf*, in soils, 69-411
Equilibrium, use of term in magmatic crystallization, 69-2404
Erbium, *New Zealand*, in stream sediments, 69-397
Eremeyevite, synthesis, 69-3027
Erie Co. v. Ohio
Erionite, *California*, in altered tuffs, 69-788, in tuffaceous rocks, 69-2319
Erselli, Riviera di Ponente v. Italy
Eruptive rocks, classification, 69-1544 ; comp. and viscosity correspond to bituminous coal ash, 69-2409 ; definitions of descriptive terms, 69-1544 ; *Italy*, petrography, anal., 69-3383
Erzgebirge v. Germany; Czechoslovakia
Eskebornite, *Puy-de-Dôme*, non-magnetic with pitchblende, comp., X-ray, 69-3329
Esmeralda Co. v. Nevada
Esterel v. France
Estonian SSR, *Sarema Is.*, rapakivi granite, 69-3393
Etch patterns, apophyllite, 69-830 ; synthetic quartz, 69-829
— pits, in galena and baryte, 69-1961
Ethiopia, Pd and Pt minerals, 69-1527 ; roseite, 69-1527 ; transcurrent faulting, 69-1786 ; *Fantale, Shoa*, fumarolitic andradite, 69-3212, geology of volcano, 69-677, ignimbrite, 69-3473 ; *Simien mts.*, geology, age, 69-678
Etna, Sicily v. Italy
Ettringite, structure, 69-2930 ; *Scawt Hill*, structure, 69-180
Eucairite, *Czechoslovakia*, 69-871
Euclase, pleochroism for OH-stretching frequency, 69-2646 ; Raman spectrum, 69-3607 ; *USSR*, in metasomatites, 69-1139
Eucryptite, *North Carolina*, opt., anal., unit cell, 69-555 ; *Ontario*, 69-1773
Eudialyte, *Ontario*, 69-1774
Eulite, *Labrador*, in Fe formation, anal., opt., unit cell, sp.gr., 69-2279 ; *Karelia*, ferrohypersthene, comp., opt., 69-2732
Eureka Co. v. Nevada
Europe, evaporites, 69-3497 ; minerals identified in Chalk, 69-109 ; montmorillonite, in Chalk, origin, review of hypotheses, 69-109 ; *Alps*, biotites, 69-3270, calcareous sea-bottoms of Rhaetian and Jurassic sea, 69-2513, Dachsteinkalk reef complex, 69-2513, ophiolites of the Versoyen zone, 69-2433, radiometric ages, 1957-1962, 69-1802 ; *Baltic*, amber, 69-1733 ; *Baltic Sea*, sulphides in sediments, 69-1668 ; *Baltic Shield*, age of Jotnian, 69-2731 ; *Black Sea*, $CaCO_3$ saturation, 69-1351, Mo in sea-water, 69-429, Mo in sediments, 69-1315, sediments, 69-1311, U in water, 69-3154, W in sediments, 69-1316, Th isotopes, 69-2202 ; *Bohemian massif*, amphiboles in skarns, migmatization, 69-790 ; *Carpathians*, limestone diagenesis, 69-3513, Sr in sediments, 69-2179, tr. elements in volcanites, 69-1307, types of pyrite occurrences, 69-1264 ; *Lake Constance*, Sr in onkolites and shells, 69-2513 ; *North Sea*, comp. of interstitial water in clays, 69-2873 ; *Peribaltic area*, anal. of Zechstein deposits from boreholes, 69-415 ; *Pyrenees*, radiometric ages, 1957-1962, 69-1802 ; *Rhenish Schiefergebirge*, reef limestones, 69-2513 ; *Scandinavia*, clay minerals in soil profiles, podzolization, 69-1939 ; *Scandinavian shield*, charnockitic rocks, 69-2400 ; *southern Alps*, wollastonite polymorphs, 69-2891 ; *western Alps*, volcanism, 69-3372
Europium, determination in rocks by neutron activation, 69-69 ; determination in Th compounds from monazite, 69-970 ; in standard rocks, 69-1374 ; neutron activation anal. of chromatogram, 69-70 ; separation by chromatography, 69-70 ; *England*, in fluorite, 69-571 ; *New Zealand*, in stream sediments, 69-397
Euxenite, Bi in, 69-3223 ; metamict, identification by γ-ray spectrum, 69-854 ; *South Africa*, in pegmatite, 69-2712
Evaporites, concentration, implications of irreversibility, 69-3071 ; reasons for occurrence of bishofite, 69-1325 ; S isotope variation in, 69-458 : *California*, age, mineralogy, 69-2538, origin, mineralogy, hydrochemistry, 69-1324 ; *England*, and mineralization, 69-1143 ; *Europe*, depositional basin, 69-3497 ; *Kazakh SSR*, 69-2531 ; *New Mexico*, geology of 5th ore zone, 69-2537 ; *Saskatchewan*, carnallite–sylvite relationships, 69-2536 ; *Siberian platform*, carnallite discovered, 69-2671 ; *Sicily*, mineralogy, B, Br, and Rb in 69-3115 ; *Stassfurt*, reworking of potash salts, 69-3521 ; *Ukrainian SSR*, alkali metal concentrations, 69-412, K in, 69-2209
Eveite, crystal structure, 69-2398 ; *Sweden*, anal., opt., X-ray, 69-2397
Evergreen v. Colorado
Evje v. Norway
Evora v. Portugal
Evrashka-Seene river, Siberia v. Russian SFSR
Exploration, for U low grade deposits, 69-68 ; geoelectric, for Cu ores, 69-214 ; *Austria*, dithizone for Zn, 69-1392, hydrochemical, 69-466 ; *Cornwall*, geochemistry and inclusions, for ore bodies, 69-1384 ; *Queensland*, for sapphire, 69-337 ; *Siberia*, criterion for Ta, 69-1390 ; *South Africa*, radiometric surveys, 69-2939 ; *Taiwan*, for Au and Cu, 69-3323 ; *Urals*, aeromagnetic for Fe ore, 69-2026 ; *Yugoslavia*, dithizone, for Zn, 69-1392
—, geochemical, B indicators, 69-3084 ; use of Se haloes, 69-434 ; for Hg, 69-1383 ; for Hg with atomic absorption photometer, 69-3167 ; use of fluid inclusions, methods, 69-1385 ; use of
69-435 ; *Alaska*, Au, Zn, Pb and
anomalies, 69-1387 ; *Austria*, 69-1
for Mg, Cu, Pb-Zn, U, 69-466 ; *Color*
69-2224, anal. of stream waters, 69-3
for Au, 69-1103 ; *Michigan*, 69-13
Montana, for Pb-Zn, 69-3165 ;
Zealand, by use of statistics, 69-455,
Cu, 69-464, for Cu, Ni, Zn, 69-4
Uganda, Cu anomalies, 69-3164 ; *U*
statistical methods, 69-2220
—, magnetic, *Brazil*, for Mn deposits,
576
Extraterrestrial material, diamonds
interstellar dust, 69-2709 ; graphite
interstellar matter, 69-477 ; impur
in interstellar graphite grains, 69-4
influx during Silurian, 69-3172 ; in
planetary, mass accretion rate to Ea
69-139 ; magnetic spherules from co
ary meteors, 69-3196 ; origin of parti
in polar ice, 69-3196
Extrusive basalts *v.* basalts, extrusive
Extrusive rocks, *Italy*, Rb and K in,
1293 ; *Siberia*, Nb and Ta distribut
69-379 ; *USSR*, stratigraphy, 69-245

Faeröe (Faröe) Is. v. Atlantic Ocean
Fairchildite, *Ontario*, 69-1773
Fairfieldite, *France*, in pegmatite,
69-869
Falkmanite-bournonite, *Bavaria*, *d*-val
69-2670
Fallout, *Jerusalem*, comp., 69-444
Falmouth Consolidated mine, Cornwal
England
Fantale, Shoa v. Ethiopia
Faratsiho v. Malagasy Republic
Farewell v. Alaska
Farsundite, use of term, 69-1542 ; *Nor*
use of term, petrography, chemistry
petrogenesis of, 69-637
Fassaite, *South Africa*, in kyanite eclo
anal., 69-2595
Fassaite eclogite, *New South Wales*, in
pipes, anal., chem., petrography, 69-
Fatty acids, in sediments and oils, or
69-3124 ; *France*, in sediments, 69-3
Faujasite, a high-SiO_2 to low-SiO_2
stitutional series, 69-552 ; Ce
exchanged, structure, 69-160
Faulting, *Ethiopia*, transcurrent, 69-17
Fayalite, shock-wave equations, 69-26
structure, refined by 3-dimensional
squares, 69-136
Fazekasboda-Mórágy v. Hungary
Feldspar, Al content and structure,
2898 ; anal. by atomic adsorp
spectrometry, 69-2782 ; book, 69-18
flame photometric determination o
Na and Ca in, 69-943 ; in chondr
anal., X-ray, 69-1401 ; in gra
and pegmatites, Pb isotopes in, 69-6
K/Ar dating, 69-2738 ; O mobility
69-366 ; partition coefficients of
Cs, Sr and Ba in, 69-545 ; repre
tation of chemical analyses in
dimensional space, 69-549 ; structur
liquid mixtures with silica, 69-1
thermodynamic criteria for equilib
in, 69-3072 ; *Angola*, alteration ph
69-1010 ; *Austria*, kaolinization by H_2
from pyrite weathering, 69-1020 ; *Bu*
in river sediments, 69-2533 ; *Califo*
age, in monzonite, 69-913 ; *Finland*
migmatites and viborgites, O iso
ratios, 69-1295 ; *Germany*, in tuff, a
69-2444 ; *Italy*, in granitic rocks,
69-3385 ; *New Zealand*, coexis

spar, *(contd.)*
ystallization of, 69-707 ; *Rajasthan*, in
yered complex, 69-3452 ; *Sea of Japan*,
glass, opt., 69-2460 ; *Siberia*, pelit-
ation in oil reservoir rocks, 69-2559 ;
outh Africa, in granite, X-ray, 69-3358 ;
rentino, in volcanic rocks, opt., 69-3387
alkali, electrical conductivity, 69-1750 ;
change of alkali atoms, 69-2118 ; ex-
olved, optimal phase boundaries, 69-
052 ; high-*T* thermodynamic props.,
9-1167 ; homogenization of perthitic,
9-1228, 1229; Na–K exchange, 69-1230;
rdering, experimental study, 69-311 ;
ubsolidus crystallization of gels and
lasses, 69-2120 ; *China*, phenocrysts,
pt., 69-695 ; *Cornwall*, megacrysts in
ranite, petrogenesis, 69-1565 ; *France*,
bliquity in granite, opt., X-ray, 69-
276 ; *India*, triclinicity in charnockites,
9-3577 ; *Italy*, non-equilibrium mixing,
hem., opt., X-ray, 69-3281 ; *Montana*,
omp., opt., zonal distribution in grano-
liorite, 69-2309 ; *Sweden*, in orogenic and
ost-orogenic rocks, 69-2411 ; *Swiss Alps*,
rystal structure and geothermal history
f Alps, 69-152
Ba-, calculated powder patterns, 69-
757
K-, age-determination, 69-25 ; calcu-
ated powder patterns, 69-2757 ; elec-
rical conductivity, 69-2652 ; Rb/Sr age
eference standard, 69-2740 ; stability
nd kaolin development, 69-1017; *Antarc-
ica*, in adamellite, age, 69-901 ; *Bavaria*,
n gneiss and diorite, cross-shaped inter-
rowths, 69-2310 ; *Brittany*, by-product
n gneiss, 69-2578 ; *California*, in tuff-
ceous rocks, 69-2319, monoclinic, in
ltered tuffs, 69-788 ; *Finland*, in
egmatites, anal., 69-3278 ; *France*, in
ranite, anal., 69-2416 ; *Honshu*, por-
hyroblasts in gneiss, opt., 69-3282 ;
Italy, high *T*, in 'pietra verde', opt.,
9-3277, in xenoliths, opt., X-ray, 69-
525, replacement by microperthite,
9-2440 ; *New Zealand*, in gneiss, opt.,
hysical data, 69-824 ; *Norway*, in
epheline syenite and pegmatite, anal.,
-ray, opt., structure, 69-2317 ; *South
frica*, phenocrysts in granite, origin,
9-33 ; *S.W. England*, in granite, 69-
634 ; *Sweden*, in igneous rocks, X-ray,
pt., 69-2411 ; *USSR*, in pegmatites, Rb
n, 69-3279 ; *USA*, in continental shelf
ediments, X-ray, 69-2551
dspathoids, *Arkansas*, 69-2683
ix II mine, Szöc v. Hungary
site, *Lake District*, 69-2415
naghastingsite, *India*, in diorite-
nonzonite complex, anal., opt., 69-3255
n v. Norway
abark, Western Australia v. Australia
nite, *Czechoslovakia*, xenoliths in Tertiary
breccia, 69-673
agen v. Norway
berite, *Argentina*, structure, 69-1084 ;
Colorado, Mössbauer spectrum, 69-2925
gana v. Uzbek SSR
gusonite, Bi in, 69-3223 ; structure of
M' phase, 69-194 ; *Colorado*, in carbonate
eins, 69-1778 ; *Czechoslovakia*, metamict
n pegmatite, opt., sp.gr., anal., 69-583
managh v. Ireland
rallite, *New Caledonia*, comp., reduction
f, 69-3008
rera Is. v. Spain
riere, Piacenza v. Italy
Ferri-ilmenite, *Sicily*, in lava, 69-763
Ferripleonaste, *Malagasy Republic*, in sahl-
ite, anal., paragenesis, 69-3306
Ferrisalite, *France*, in breccia and dyke,
anal., opt., 69-517
Ferrite, from cohenite, in meteorite, 69-
480 ; spinel, single crystal synthesis,
spiral growth, 69-831 ; spinel structure,
X-ray determination of O parameters,
69-1962
Ferritine, X-ray data for inorganic core of,
69-1067
Ferroaxinite, end member of axinite group,
69-508
Ferrodolomite, *Labrador*, in Fe formation,
anal., 69-2279
Ferrohedenbergite, *Labrador*, 69-1549
Ferrohortonolite, *Labrador*, 69-1549
Ferrolizardite, *Egypt*, in 'serpentinite',
69-3405
Ferromagnetism, *Etna*, of 1928 lava, 69-575
Ferrosalite, *Labrador*, in Fe formation,
anal., opt., unit cell, sp.gr., 69-2279
Ferroselite, *Colorado*, anal., reflectivity,
VHN, 69-2620 ; *New Mexico*, in sand-
stone, anal., reflectivity, VHN, 69-2620 ;
Wyoming, stellate penetration twins,
X-ray, 69-1779
Ferrosilicon, *Ukrainian SSR*, in sand,
meteoritic origin, 69-1767
Ferrospinel *v.* hercynite
Ferrostibian, identity with långbanite,
X-ray, 69-2335
Ferrotungsten ores, determination of Sn
and As in, 69-1873
Fetlar, Shetland Is. v. Scotland
Fiamme, *Ethiopia*, in ignimbrite, origin,
69-3473 ; *Nicaragua*, in ignimbrite, origin,
anal., 69-756
Fibroferrite, IR, 69-2637
Fichtelgebirge, Bavaria v. Germany
Fichtenhübel, Slovakia v. Czechoslovakia
Fife v. Scotland
*Fiherenana river, Tuléar v. Malagasy
Republic*
Fiji v. Pacific Ocean
Finero, Valle Cannobina v. Italy
Finistère v. France
FINLAND, amino acids in Precambrian
graphite and marble, 69-1259 ; index of
minerals, book, 69-985 ; K-feldspars, 69-
3278 ; O isotope ratios, 69-1295 ; ore
deposits, Cu, Fe, Ni, Pb, Ti and Zn,
69-1094 ; pegmatite classification, 69-
2491 ; pyrite in sandstone blocks,
69-1669 ; *Gulf of Bothnia*, pyrite con-
cretions, 69-1669 ; *Jussarö*, Fe deposits,
anal., 69-1996 ; *Kaavi*, chromian tour-
maline, 69-3227 ; *Karelia*, U ore, 69-
1996 ; *Kemi*, chromite ore in layered
ultrabasic rocks, 69-1996 ; *Korsnäs*,
sulphide deposits, wallrock alteration,
69-2935 ; *Outokumpu*, chromian tour-
maline, 69-3227, chromite, 69-2333,
hydrated oxide of Cr, 69-1536, mackina-
wite, 69-2346, Precambrian schists, 69-
1345, sulphide deposits, wallrock altera-
tion, 69-2935 ; *Pyhäsalmi*, sulphide
deposits, wallrock alteration, 69-2935 ;
Vihanti, sulphide deposits, wallrock
alteration, 69-2935 ; *Ylöjärvi*, mackina-
wite, 69-2345, sulphide deposits, wallrock
alteration, 69-2935
Fireclay, dimethyldioctadecyl ammonium
derivatives, 69-2831 ; *India*, isomorphous
substitution and ionic formulae, anal.,
69-1914 ; *Nepal*, nature and chem. data,
69-531
— mineral, O–H stretching vibrations, IR,
X-ray, 69-2844
Firn, *Antarctica*, geochemical analysis,
69-892
Fishtail lake, Ontario v. Canada
Fission tracks, in apatite and sphene, 69-
2742 ; ^{238}U in biotite, 69-1822
Flakstadøy, Lofoten v. Norway
Flame photometry, determination of K, Na
and Ca in feldspars, 69-943 ; O-sheath for
burner, 69-1865
Fleischerite, synthesized, cell dimensions,
69-1195
Flint clay, *Kentucky*, in coal bed, volcanic,
69-2544
Florencite, *Normandy*, in alluvium, sp.gr.,
refr. ind., X-ray, 69-1513 ; *Virginia*,
barian-, in pegmatite, chem., X-ray,
69-1514
FLORIDA, apatite, 69-2369 ; metal enrich-
ment in sedimentary rocks, 69-1334 ;
phosphate deposits, 69-2369 ; *Chocta-
whatchee Bay*, sediments, 69-3128 ; *Polk
Co.*, beraunite and cacoxenite, 69-2674
Flotation, by fatty acids, influence of
surface solubility on, 69-3000 ; of
carbonates and phosphates, 69-3000 ;
of serpentine, 69-30 ; recovery and
induction time, 69-2755
Fluid inclusions *v.* inclusions, fluid
Fluidization, experimental investigations,
69-276 ; *Queensland*, cause of pebble
dykes, 69-255
Fluoborite, *California*, anal., X-ray, 69-
1509
Fluor-apatite *v.* apatite
Fluorescence, *Malagasy Republic*, of scheel-
ite, 69-2636 ; *New Jersey*, of stalactites,
69-2678 ; *New York*, of conglomerate, 69-
2688 ; *Pennsylvania*, of calcite, 69-2689
Fluorides, BaF_2 and CaF_2, *P* and *T*
derivatives of elastic constants of, 69-
2629 ; water desorption and crystal
hardness, 69-2621
Fluorine, and rapakivi texture in granites,
69-3440 ; determination, 69-2230 ; de-
termination in rocks and minerals,
69-2775, 2777 ; determination in silicates,
69-1859 ; in amblygonite-montebrasite
series, 69-3341 ; in illite, 69-92 ; rapid
determination in rocks and minerals,
69-1869 ; spectrophotometric determina-
tion, 69-1853 ; *Bohemia*, in apatite,
69-601 ; *Caucasus*, in micas in granitic
rocks, 69-383 ; *Colorado*, 69-2224 ;
England, in granitic rocks, 69-1283 ;
Georgian SSR, in micas in granitic rocks,
69-383 ; *Italy*, in ignimbrites, 69-2230 ;
Naples, in volcanic products, 69-3109 ;
Sicily, in phosphate deposits, anal., 69-
274 ; *S.W. England*, in granites, 69-3095 ;
Tien-Shan, correlation with Be in
syenites, 69-361 ; *Transbaikalia*, in alkalic
rocks, in amphiboles, in biotites, 69-357 ;
USA, and Be in volcanic glasses, 69-
2159 ; *USSR*, in ground-water, 69-2205 ;
Utah, with Be in mineralized tuff, 69-2158
Fluorite, analysis, 69-2781 ; colouring of,
inclusions in, 69-2381 ; in sulphide ore,
pseudomorphic replacement of baryte,
69-2356 ; solubility, 69-1193 ; solution
with Al salt solutions, 69-1863 ; thermo-
luminescence, 69-2634 ; *Derbyshire*,
layered with quartz in voids, origin,
69-3616, var. Blue john, in limestone,
69-3615, var. Blue john, modes of
occurrence, 69-3616 ; *England*, Eu in,
69-571, *RE* in, neutron activation, 69-
571 ; *France*, in silicified layers of
sediment, 69-267 ; *Germany*, extensive

Fluorite, *(contd.)*
vein deposits, 69-2993, veins with pitchblende, 69-221 ; *Illinois*, occurrence and use, 69-2034 ; *India*, related to carbonatite (?), 69-2995 ; *Italy*, 69-2014, 2015 ; *Kazakh SSR*, inclusions in, 69-2170 ; *Korea*, 69-1109 ; *Mongolian Republic*, distribution patterns, 69-2035 ; *Morocco*, inclusions, 69-2215 ; *Mozambique*, extensive vein deposits, 69-2994 ; *New York*, in dolomite, 69-2682 ; *Tasmania*, fluid inclusions in, 69-2955 ; *Tien Shan*, anal., 69-793
— -quartz veins, *USSR*, *T* and comp. of solutions forming, 69-349
Fluor-phlogopite, synthetic, 69-147
Fluorspar *v.* fluorite
Fluotaramite, *Germany*, in trachyte, anal., opt., X-ray, 69-3256
Flysch, *Romania*, ripple marks in, 69-3486
Fogo, Cape Verde Is. v. Atlantic Ocean
Folding, *Greece*, in peridotites, origin, 69-1580 ; *India*, 69-3584 ; *Pyrenees*, Hercynian phases, 69-3548
Folldal v. Norway
Foraminiferal tests, O isotopes in, 69-459
Ford ranges v. Antarctica
Forge industry, mineralogical problems, 69-887
Formosa v. Taiwan
Fornacite, *USSR*, structure, 69-1086
Forsterite, -anorthite reactions, 69-2115 ; equilibrium data, 69-1216 ; formation from MgO and enstatite, 69-1169 ; reactions with tricalcium silicate and aluminate, 69-280 ; shock-wave equations, 69-2626 ; structure, refined by 3-dimensional least squares, 69-136 ; synthetic, relation of cell dimensions and cation content, X-ray, 69-501 ; thermal expansion, 69-2632
' Fortunitic ' rock type, 69-1569
Fortymile v. Alaska
Fosdick mts., Ford ranges v. Antarctica
Foshagite, stability, 69-303 ; synthesis, 69-1205
Fossils, bone, comp., IR, X-ray, 69-603 ; growth bands and Cretaceous year-length, 69-2693 ; radioactivity in, 69-1339 ; *Yorkshire*, wood, tr. elements in, 69-3112
Fournial v. France
Foyaite, sodalite, *Greenland*, chem. anal., 69-635
France, basalts, 69-2418 ; coalfields, 69-2520 ; depositional environment of M. Jurassic shales, 69-407 ; ectinite, age, 69-907 ; mica schist, age, 69-907 ; *Morcles nappe*, geology, petrography, 69-1693 ; tonsteins, 69-2520 ; tonstein, volcanic ash, 69-770 ; tr. elements in M. Jurassic shales, 69-407 ; *Agly Massif, Pyrénées*, magnetism and structure of metamorphic rocks, 69-837 ; *Aigues-Mortes, Gard*, O isotopes in evaporating seawater, 69-1350 ; *Alençon, Normandy*, porphyroids, 69-3369 ; *Alpes-Maritimes*, proof of Eocene volcanism, 69-646 ; *Alps*, depth of Moho, 69-2695 ; *Angles, Basses-Alpes*, limestones and marls, 69-3496 ; *Ansignan, Pyrénées*, age of charnockite, 69-2722 ; *Aquitaine basin*, age of rocks, 69-1 ; *Aran valley, Pyrénées*, silicate-ore associations, 69-633 ; *Argentat, Corrège*, ultramylonite, 69-2580 ; *Argentera, Alpes Maritimes*, granite, 69-3370 ; *Ariège*, bauxite from marl, 69-1932 ; *Armorica*, mineralization, 69-2936 ; *Aubiers, Deux-Sèvres*, granite, migmatite, 69-3554 ; *Auzat, Ariège*, pegmatite with vivianite, mitridatite, fairfieldite, 69-869 ; *Ax-les-Thermes*, autunite, 69-868 ; *Barcelonette, Hautes-Alpes*, clay minerals, 69-113 ; *Bedarieux, Hérault*, peridotite xenoliths, in kimberlitic pipes, 69-3524 ; *Bessines, Haute Vienne*, gibbsite, 69-2878 ; *Bilstein*, age of granite, 69-8 ; *Bonascre*, autunite, 69-868 ; *Brézouard*, age of granite, 69-8 ; *Brioude-Massiac, Massif Central*, Sb ores, 69-2959 ; *Brittany*, radiometric ages, 1957-1962, 69-1802, stilpnomelane, 69-1463, wolfeite, 69-3342 ; *Brugend mine*, radioactive inclusions, 69-3097 ; *Canigou, Pyrenees*, folding, Hercynian phases, 69-3548 ; *Cantal*, clinopyroxenes, 69-3229 ; *Castillon massif, Ariège*, granitization of leptynite and gneiss, regional metamorphism, 69-3551 ; *Causses*, limestone-fissure infillings, 69-2521 ; *Cestas, Gironde*, Cu-rich podsol, 69-1332 ; *Chaîne des Puys*, age of wood, 69-9 ; *Chaméane, Puy-de-Dôme*, eskebornite, 69-3329 ; *Champ-du-Feu*, basement complex, 69-654 ; *Chassenon, Haute-Vienne*, quartz with cleavages, 69-2570 ; *Chedeville-en-Ambazac, Haute-Vienne*, beryl, cassiterite, lepidolite, tourmaline, 69-3228 ; *Codouls, Var*, nodule in bauxite, 69-586 ; *Collet-de-Dèze, Lozère*, Sb, 69-205 ; *Cotentin peninsula*, granite, 69-652 ; *Couret mine, Gavarnie, Hautes Pyrénées*, millerite, 69-562 ; *Courtilles, Haute-Loire*, granulite facies rock, 69-2579 ; *Crêtes*, age of granite, 69-8 ; *Cussac, Haute-Loire*, inclusions in nodules, 69-647 ; *Die, Hautes-Alpes*, clay minerals, 69-113 ; *Drôme*, CH_4 inclusions in quartz, 69-2214 ; *Durance river basin, Hautes-Alps*, clay minerals, 69-113 ; *Echassières massif, Massif Central*, leucogranite, muscovite, 69-1635 ; *Esterel*, age determinations, 69-1803 ; *Finistère, Aber-Ildut*, granite massif, 69-651 ; *Fournial, Cantal*, hocartite, 69-611 ; *Gap, Hautes-Alpes*, clay minerals, 69-113 ; *Genis, Massif Central*, porphyroids, 69-3369 ; *Gergovia*, lacustrine volcano, peperite, 69-3480 ; *Grabels*, volcanic rocks, 69-517 ; *Grand-Auverné, Maine-et-Loire*, chloritoid in phyllites, 69-510 ; *Gulf of Cap Breton*, sediments, 69-3493 ; *Haute-Savoie*, greywackes, 69-1693 ; *L'Aber Benoit, Brittany*, biotite and sillimanite, 69-2578 ; *Lambert quarry, Cormeilles-en-Parisis*, O and S isotopes in gypsum, 69-1326 ; *La-Pierre-qui-Vire, Yonne* and *Nièvre*, granite, 69-2416 ; *Largentière, Ardèche*, Pb mineralization, 69-2022 ; *La Tranchée*, lithographic limestone, 69-2517 ; *Le Pouget*, ferrisalite and hastingsite in volcanic rocks, 69-517 ; *Liauzun-en-Olloix, Puy-de-Dôme*, Se, selenates, selenites, 69-559 ; *Limousin*, uraninite, 69-2421 ; *Longeray, Savoie*, meneghinite, 69-1489 ; *Lorraine*, oolitic Fe ores, 69-1122, tonsteins, 69-2519, 2520 ; *Loup*, heavy minerals in red clays, 69-646 ; *Mancelles Alps*, volcanism, 69-650 ; *Marcoles, Cantal*, gibbsite from granite weathering, 69-2878 ; *Margeride massif, Massif Central*, leucogranite, muscovite, 69-1635 ; *Maron mine, Var*, bauxite carbonate rock contact, 69-1149 ; *Mas Rouge, Bouches du Rhône*, bauxite, 69-2516 ; *Massif Central*, age of granite, 69-2724, age of rocks, 69-10, andosoil on volcanic ash, 69-114, ectinites, geochemistry, 69-3549, embrechite, 69-3553, glandular granulitic gneiss, 69-3[illegible] injection gneiss, 69-3553, leaching [illegible] amphibolite, granite and migma[illegible] 69-1329, leucogranites, 69-657, [illegible] matites, age determination, 69-[illegible] muscovitization, 69-657, nodular sch[illegible] 69-3553, radiometric ages, 1957-19[illegible] 69-1802, regional metamorphism, 69-3[illegible] 3552, soil, profiles, 69-114, volcanic [illegible] forming andosoil, 69-114 ; *Maul[illegible] Basses-Pyrénées*, inclusions in qua[illegible] 69-3296 ; *Maures*, age determinati[illegible] 69-1803 ; *Mazaugues, Var*, baux[illegible] 69-773 ; *Mercantour, Alpes Marit[illegible]* granite, 69-3370 ; *Meygal, Ve[illegible]* magnetization, 69-3367 ; *Millev[illegible] massif, Massif Central*, leucogran[illegible] muscovite, 69-1635 ; *Montagne No[illegible]* gibbsite, 69-2879 ; *Montaigut-en-Co[illegible] railles massif, Massif Central*, leu[illegible] granite, muscovite, 69-1635 ; *Mont Bl[illegible]* stilpnomelane in metamorphosed gran[illegible] 69-3562 ; *Montferrier*, volcanic rocks, [illegible] 517 ; *Mont-Pilat, Loire*, granitic-mig[illegible] titic massif, 69-653, perthite, 69-12[illegible] *Morvan*, fluorite, in silicified layers [illegible] sediment, 69-267 ; *Moun Caou, Lou[illegible] Juzon, Basses Pyrénées*, lherzolite, an[illegible] 69-518 ; *Moyenne Dordogne, Ma[illegible] Central*, metamorphic dome in schi[illegible] 69-3555 ; *Nalzen, Ariège*, siderite [illegible] bauxite, 69-3495 ; *Nancy, Meurth[illegible] Moselle*, geochemistry of clays [illegible] limestone, 69-1317 ; *Nord*, tonst[illegible] 69-769 ; *Normandy*, florencite, 69-15[illegible] *Orpierre, Hautes Alpes*, septarian nodu[illegible] 69-3127 ; *Paris basin*, palaeoecolo[illegible] O and C isotopes in lamellibran[illegible] 69-1338 ; *Pas-de-Calais basin*, tonst[illegible] 69-769 ; *Peyresourde-Vieille Aure, Ha[illegible] Pyrénées*, Mn deposits, 69-29[illegible] *Pierrefitte, Hautes Pyrénées*, Pb-Zn o[illegible] 69-2965 ; *Pierre-qui-Vire, Yonne-Niè[illegible]* gibbsite in sand and soil over gran[illegible] 69-1930, leucogranite, muscovi[illegible] 69-1635, weathering of granite, 69-21[illegible] *Plan de la Tour, Var*, feldspars, 69-32[illegible] *Planèze, Cantal*, volcanic massif, 69-6[illegible] *Plateau de la Défense*, palygorsk[illegible] 69-105 ; *Pontgibaud, Massif Cent[illegible]* metamorphic dome in schists 69-35[illegible] *Puy-de-Dôme*, metamorphism 69-35[illegible] *Pyrénées*, basement rocks, 69-798, [illegible] metalliferous districts, 69-3077, lyd[illegible] stone, 69-2561, marble and gne[illegible] 69-2581, mineral springs, 69-3151, opa[illegible] minerals, 69-648, scheelite, skarn mine[illegible] lization, 69-2010 ; *Quérigut, Ari[illegible]* granitic massif, 69-3448, granodior[illegible] diorite and granitoids in massif, 69-24[illegible] quartzite bed in granite, 69-25[illegible] *Rancié*, ranciéite, 69-2336 ; *Roussil[illegible]* sediments, 69-3114 ; *St. Cristophe, Is[illegible]* crichtonite, 69-3315 ; *St.-Flour, Can[illegible]* pillow lavas, 69-3368, volcanic mas[illegible] 69-649 ; *St.-Martin-des Prés, Côtes [illegible] Nord*, volcanism, 69-656, 2419 ; *St.-P[illegible] la-Roche, Haute-Vienne*, quartz [illegible] cleavages, 69-2570 ; *St.-Renan, Finist[illegible]* granite alteration, 69-1285 ; *St.-Sébast[illegible] Loire-Atlantique*, pegmatite, 69-33[illegible] *St.-Sévérin, Charente*, meteorite, 69-22[illegible] *St. Sylvestre, Limousin*, uraninite [illegible] autunite in granite, 69-2171 ; *St.-Vi[illegible] Puy-de-Dôme*, inclusions in nodu[illegible] 69-647 ; *Salsigne, Aude*, Au, 69-2[illegible] inclusions in quartz, 69-3168 ; *San[illegible] valley, Pyrénées*, silicate-ore associati[illegible] 69-633 ; *Savoie*, ophiolites, 69-24[illegible]

ANCE, *(contd.)*
Schirmeck, Vosges, soil profiles, 69-114 ;
Senones, Vosges, soil profiles, 69-114 ;
Serre, Jura, age of granite, 69-2723 ;
Serre de Montner, Pyrénées-Orientales, origin of magnesite, brucite, ankerite deposit, 69-3530 ; *Sidobre, Tarn,* gibbsite, 69-2879, granite alteration, 69-1286 ;
South West, geochemistry of sediments, trace elements in carbonate rocks, 69-2868 ; *Thizon massif, Massif Central,* leucogranite, muscovite, 69-1635 ;
Toulaud-St.-Cierge la Serre, Ardèche, andalusite schist, 69-799 ; *Toulon,* acid volcanism 69-645 ; *Trégastel, Côtes-du-Nord,* lamprophyre, 69-2420 ; *Trélazé, Maine-et-Loire,* chloritoid in phyllites, 69-510 ; *Trois-Épis, Haut-Rhin,* ankaratrite, 69-655 ; *Vallon de Merlier, Alpes-Maritimes,* meneghinite, 69-1489 ;
Valmaillargues, volcanic rocks, 69-517 ;
Valvignères, sediments in borehole, 69-406 ; *Var,* bauxite, 69-1150 ; *Velay,* titanomagnetite with margin of titanomaghemite, 69-573 ; *Vendée,* Armorican massif, 69-3369, uraninite, 69-2421 ;
Vérignon, Var, bauxite, glauconitic marl, karst, terra rosa, 69-3517 ; *Villeroy, Herault,* gypsum in salt marshes, 69-595 ;
Vosges, age of granites, 69-8, volcanism, 69-2423 ; *Vosges mts.,* kersantite, lamprophyre dykes, vaugnerite, 69-2417
ancevillite, *Gabon,* comp., 69-1537
ancolite, structure, 69-183 ; synthesis, 69-851; *Poland,* in phosphate rock, refr. ind., sp. gr., 69-1686
anklin v. New Jersey
anklinite, *India,* in Mn deposits, 69-3309
aser range, Western Australia v. Australia
eibergite, *Brazil,* 69-2003
emont Co. v. Colorado
ENCH GUIANA, laterites, kaolinite, gibbsite, phyllites, 69-1933
iedelite, *Kazakh SSR,* anal., sp. gr., refr. ind., 69-556, ferroan, origin, anal., X-ray, d.t.a., H., sp. gr., refr. ind., 69-556
olovite, *Siberia,* in skarn marble, refr. ind., X-ray, 69-2364
ont range v. Colorado
uardo, Lipari Is. v. Italy
uemrole mine, Temple mt. v. Utah
uerteventura Is., Canary Is. v. Atlantic Ocean
uji volcano, Honshu v. Japan
ukuoka, Kyushu v. Japan
ukushima, Honshu v. Japan
lgurites, *Scotland,* fossil, 69-893
ller's earth, book, 69-987 ; *England,* comp., X-ray, origin, occurrence, 69-1677
lvic acid, *Atlantic Ocean,* mol. wt. distribution in clays, 69-1318 ; *North Carolina,* in soils, pyrolysis of, 69-3125
maroles, *Lipari Is.,* tritium in, 69-1363 ;
Mediterranean Sea, formation of Fe ore sediments, anal., 69-2183 ; *Spain,* fossil, as Au veins, 69-258
sain, *India,* 69-781

-I *v.* standard rocks
bbro, average Au in, 69-3102 ; deformational characteristics, 69-1741 ; *Brazil,* 69-2946 ; *California,* anal., 69-3202 ; *Colorado,* age, 69-2713, Precambrian, 69-2467 ; *Cumberland,* in complex, 69-2415 ; *India,* coexisting augite and hornblende in metamorphosed, 69-3543, metamorphosed, petrography, 69-822 ; *Italy,* amphibole, 69-2435, anal., 69-3382, petrography, 69-1573 ; *Maryland,* metasomatized, 69-3593 ; *Minnesota,* age, 69-2716, petrography, modal anal., 69-718 ; *Norway,* chem., petrography, 69-1559 ; *Puerto Rico,* anal., 69-3436 ; *Quebec,* 69-2196 ; *Scotland,* Newer, Rb/Sr isotopes, 69-2497 ; *Southern Africa,* Sr isotopes, 69-2155 ; *Tien-Shan,* distribution of Be, 69-361 ; *Western Australia,* spinel-bearing meta-, 69-3587 ; *Wisconsin,* magnetization of, 69-1557
—, hornblende, *Odenwald,* anal., XRF, UV, 69-3099
—, magnetite, *Western Australia,* V-bearing, anal., 69-787
—, olivine, *Rajasthan,* anal., 69-693 ; *Spain,* altering to eclogite, 69-2424
—, quartz, *Czechoslovakia,* recrystallized volcanics, 69-3454
— -amphibolite, *Siberia,* Cambrian, anal., 69-3394
— -syenite, *Malagasy Republic,* geology, 69-1595
Gabbroic rocks, *California,* Ta in, 69-2163
GABON, *Mounana,* mounanaïte, 69-3348 ; *Mouana mine,* curienite, francevillite, 69-1537
Gadolinite, Bi in, 69-3223 ; *South Africa,* in pegmatite, 69-2712
Gadolinium, determination in Th compounds from monazite, 69-970 ; in rhabdophane, 69-3343 ; *New Zealand,* in stream sediments, 69-397
Gadoni, Sardinia v. Italy
Gagnon, Quebec v. Canada
Gahnite, *Massachusetts,* in beach sand, 69-2543 ; *New Jersey,* 69-2679
Gakararanga, Kivu v. Congo
Galapagos Is. v. Pacific Ocean
Galena, annealing of ore, 69-2090 ; artificial and natural deposits, 69-1132 ; cadmian, thermal expansion, 69-2632 ; dislocations and etch pits, 69-1961 ; effect of tailings on tree tissue, 69-2222 ; electrophysical properties, 69-1749 ; melting curve, 69-3018 ; Pb isotopes in, 69-915 ; thermal expansion, 69-2632 ; Tl in, X-ray, 69-1186 ; *Altai-Sayan,* isotopic comp. of Pb, 69-352 ; *Brazil,* 69-2003 ; *Czechoslovakia,* 69-2385 ; *Donets Basin,* Pb isotopes in, 69-460 ; *France,* conditions of deposition, 69-2965 ; *Germany,* 69-2993; *India,* 69-2981, tr. elements in, 69-2024 ; *Italy,* 69-2015, 2978 ; *Leicestershire,* in ore, 69-2665 ; *Maryland,* 69-2680 ; *New York,* in dolomite, 69-2677, 2682 ; *Nottinghamshire,* in limestone, 69-2023 ; *Portugal,* 69-2971 ; *Russian SFSR,* dendritic and skeletal forms, 69-1730, in septarian nodules, 69-1322 ; *Siberia,* Pb isotope ratios, 69-2000 ; *Soviet Far East,* comp. of aqueous extracts, 69-350 ; *Switzerland,* in dolomite, sedimentary, 69-1272 ; *Tadzhik SSR,* Pb isotope anal., 69-3092 ; *USA,* Pb isotope ratios of zoned crystal, 69-2143 ; *USSR,* in sandstone, Pb isotope anal., 69-3092, Re and Mo content, 69-405 ; *Utah,* Ag in, 59-2976 ; *Uzbek SSR,* Pt group elements in, 69-2147
Galicia v. Spain
Gallium, bacterial leaching from sulphide ores, 69-2141 ; determination, 69-45 ; in iron meteorites, 69-2236, 3189 ; *New Zealand,* in augites, hypersthenes, hornblendes and plagioclases, 69-3083 ; *Romania,* in ore, 69-1261 ; *St. Kitts,* in lavas, 69-724 ; *Vietnam,* in Pb-Zn ores, 69-237
— compounds, antimonate, phosphide, absolute polarity, 69-132
Gällivare v. Sweden
Galveston Bay v. Texas
Galway v. Ireland
Gambellara, Vicenza v. Italy
Gamma-ray spectra, radioactive minerals, 69-854
— spectrometry, mobile spectrometer, 69-2813
Ganonoque, Ontario v. Canada
Gap, Hautes-Alpes v. France
Gard v. France
Garnet, anal. in terms of end-members, 69-1255 ; chrome-, in diamond, anal., 69-504 ; Fe and Mg in coexisting minerals and, 69-1348, 2154, 2261 ; from dissociation of epidote, 69-1206 ; inclusion textures in syntectonic, 69-3206 ; inclusions in diamonds, X-ray, 69-3061 ; in diamond pipes, anal., 69-1648 ; in granulite and charnockite, anal., 69-1701 ; –mica equilibria, 69-2130 ; nature of solid solution in, 69-1348; opt. absorption spectra, 69-2643; origin in metamorphic rocks, 69-1215; Raman spectrum, 69-3607 ; *T* of formation, 69-1209; Ti-, idealized formula, 69-3208 ; tr. elements in coexisting clinopyroxene and, 69-2168 ; U in, 69-386 ; *Adirondack highlands,* in granulite facies, 69-2603 ; *Arizona,* in eclogite inclusions, anal., 69-3590 ; *Australia,* in calc-alkaline rocks, anal., origin, 69-1414 ; *Austria,* in skarn, anal., 69-791, replacing siderite, 69-2937 ; *Burma,* in river sediments, 69-2533 ; *Carpathians,* from metamorphic complex, anal., 69-1416 ; *Colombia,* in eclogite boulders, anal., properties, 69-725 ; *Finland,* in migmatites, O isotope ratios, 69-1295 ; *France,* in pegmatite, 69-869, in peridotite xenoliths, anal., 69-3524 ; *Germany,* in eclogite, comp., 69-3239 ; *India,* 69-823, anal., sp.gr., opt., 69-503, inclusions in porphyroblasts in schist, 69-3582 ; *Italy,* anal. of zones in, 69-3207, comp., phys. props., 69-1411, phys. props., opt., X-ray, IR, 69-1413, spessartine-grossular, XRF, 69-2262, trace elements in, 69-1412 ; *Japan,* and coexisting clinopyroxene in eclogite, anal., 69-3426, grossular-spessartine in schist, anal., 69-2259, in schist, phys. props., 69-2282, Mn-V, 69-1096 ; *Lesotho,* chromium, anal., 69-2390 ; *Liberia,* in metamorphic rocks, comp., 69-2594 ; *Minnesota,* in gneiss, comp., 69-2613 ; *Morocco,* in mica schist, 69-3569 ; *New Jersey,* 69-2679 ; *New South Wales,* in inclusions in basic pipes, anal., opt., 69-3428 ; *New Zealand,* in gneiss, opt., physical data, 69-824 ; *Ontario,* flattened in gneiss, genesis, 69-505 ; *Pamirs,* in eclogite xenoliths, anal., 69-3568 ; *Poland,* anal., opt., 69-815, chromian hydrogrossular, anal., sp. gr., origin, 69-2263 ; *Rhodesia,* from Precambrian metamorphics, anal., 69-3572 ; *Scotland,* anal., 69-1419, in agglomerate, anal., 69-1415, in eclogite, anal., 69-1705 ; *Siberia,* almandine-spessartine, anal., 69-1701, in eclogites, comp., 69-1649, in metamorphic complexes, refr. ind., Fe/Mg ratios, 69-2273, in xenoliths, anal., 69-1586 ; *Skye,* anal., 69-1706 ; *Spain,* in olivine gabbro, anal., 69-2424, zoned in eclogite, anal., opt., 69-3217 ; *Sweden,* comp., refr. ind., unit cell, 69-2411 ; *Ukrainian SSR,* in slates, comp., 69-1462, in xenoliths, 69-1410

Garnetoid, $Ca_3Al_2(O_4D_4)_3$, neutron and X-ray diffraction, 69-2102
Garnet ridge v. Arizona
Garnierite, *Mysore,* in ultramafic rocks, anal., X-ray, origin, 69-3274
Garo hills. Assam v. India
Gartly, Aberdeenshire v. Scotland
Garhwal v. India
Gas, Ar isotopes in hydrocarbon, 69-448 ; Ar/He ratio in hydrocarbon, 69-447 ; C isotopes in hydrocarbon and magmatic, 69-449 ; determination of sub-μg amounts of Hg in, 69-1877 ; inclusions in quartz, anal., 69-1367 ; in inclusions, 69-1369 ; migration and maturity of natural methane from C isotope comp., 69-3159 ; ^{15}N in natural, 69-344 ; origin of natural, 69-2216 : *Caucasus,* butane isomers in natural, 69-3158 ; *USSR,* of mud volcanoes, geochemistry, possible field, 69-1371 *v.* also volcanic gas
— chromatography, for investigating surface properties of clays, 69-2831
Gas hills v. Wyoming
Gas reservoir, age, He/Ar, 69-447
Gaspé, Quebec v. Canada
Gastaldite *v.* glaucophane
Gatumba v. Rwanda
Gault quarry, Cornog v. Pennsylvania
Gavarnie, Hautes Pyrénées v. France
Gävle v. Sweden
Gävleborg v. Sweden
Gaya, Bihar v. India
Gaylussite, *Chad,* in salt deposits, 69-1770 ; *Nevada,* anal., X-ray, 69-1072
Gebel el Auenat, Cufra v. Libya
Geco mine, Ontario v. Canada
Gedanite, *Baltic,* H., brittleness, 69-1733
Gedrite, stability of synthetic Mg-Fe solid solutions, 69-2111 ; *Ontario,* relations with aluminosilicates, 69-3588
Gehlenite, from allophane or kaolinite with $Ca(OH)_2$, 69-1917 ; from dissociation of epidote, 69-1206
—, Al-, Ga-, structure, least squares refinement, 69-155
Geikielite, refr. ind., dispersion curve, absorption coefficient, 69-558 ; *Quebec,* in marble, X-ray, anal., 69-3317
Gem Park, Wet mts. v. Colorado
Gemstones, experimental growth, 69-1171 ; mineral inclusions in, anal., 69-3062 ; *California,* 69-1898, 3069 ; *Iran,* crown jewels, book, 69-985 ; *Western Australia,* localities, 69-1245
Genis, Massif Central v. France
Geobotany, *Northern Territory,* in mineral exploration, 69-461
Geochemical analysis, fractional, *Kuznetsk Alatau,* advantages for comparison of magmatic complexes, 69-356
— processes, application of thermodynamic principles, 69-347
Geochemistry, acid-base interaction and total activity coefficients, 69-1256 ; elementary anal. in, book, 69-2823 ; evaluation of irreversible reactions, 69-3071 ; handling and storage of data, 69-42 ; of the 4 types of surface rock alteration, 69-1328 ; significance of background dispersions, 69-3079 ; skew distributions in, 69-1260 ; stable isotope, application to ancient reef-associated carbonate rocks, 69-1314 ; *Northern Territory,* in mineral exploration, 69-461
Geochronology, Cretaceous month and year length, 69-2693
Geocronite, 69-3020 ; diagnostic features, 69-3330 ; *Rajasthan,* in core sample, H., reflectivity, X-ray, 69-570
Geological itineraries, *Angus* and *Fife,* 69-1896 ; *Italy,* 69-1762
George and Charlotte mine, Devon v. England
Georgia, kaolins, 69-102 ; monazite deposits, 69-200
Georgian SSR, pectolite, 69-3241; *Dzirula,* Ta, Nb, Sn, F in micas, 69-383
Geosynclines, development, 69-1794 ; metallogenesis of, 69-251 ; *Carpathians,* model of furrow, orientation data, 69-1685 ; *Czechoslovakia,* magmatism and ore genesis, 69-253
Geothermics, significance of K loss from depths of earth, 69-1157
Geothermometers, allevardite, 69-2833 ; titanomaghemite, 69-1483
Geothermometry, Ca between coexisting amphibole and plagioclase, 69-3082 ; Fe and Mg between olivine and pyroxene, 69-3081 ; metal ratios in ore deposit, 69-3071 ; *Hawaii,* Ni partition applied to lava lake minerals, 69-2501
Gerevi hills v. Tanzania
Gergovia v. France
Germanite, stability, 69-3024
Germanium, for geochemical prospecting, 69-435 ; geochemistry in thermal carbonate waters, 69-439 ; in iron meteorites, 69-2236, 3189 ; in sphalerite, 69-1185 ; in topaz, influence on colour, 69-3216 ; in waters of ore deposits, 69-435 ; tr. distribution between metal, silicate and sulphide phases, 69-1201 ; *Caucasus,* in thermal carbonate waters, 69-439 ; *Kazakh SSR,* in new sulphide mineral, anal., 69-613 ; *New Zealand,* in waters, 69-441 ; *Pamirs,* in thermal carbonate waters, 69-439; *Taupo,* in thermal waters, 69-441 ; *USA,* in sphalerite, 69-2339
— compounds, dioxide, cristobalite modification, 69-3006, hydrothermal investigation, 69-3005, single crystal growth, 69-282 ; germanates, chain structure, 69-1975 ; Li-germanate, structure, 69-2914 ; Zn-germanates, high *P* transformations, 69-2114
Germany, basaltic rocks, 69-1304 ; bioclastic limestones, 69-2513 ; Ca and Mg in carbonates, 69-2513 ; evaporites, 69-3497 ; U minerals, tr. elements in, 69-2148 ; *Bavaria,* ages of basement metamorphics and intrusives, 69-1804, K-feldspars, 69-2310, pegmatite, 69-3391 ; *Bayerischen Wald,* granodiorites, quartz diorites, 69-3099 ; *Bergisch-Gladbach,* allophane, alumohydrocalcite, 69-2359 ; *Bergmannssegen, Hanover,* koenenite, structure, 69-164 ; *Black Forest,* alteration of rhyolites, 69-2556, bytownite, 69-3290, Zr/Hf in granites, 69-1279 ; *Brandholz-Goldkronach, Fichtelgebirge, Bavaria,* gold quartz veins, 69-2670 ; *Brocken,* granite tectonics, 69-735 ; *Burg hills,* isotypic mictite, 69-2444 ; *Daun, Eifel,* basaltic lavas, 69-670 ; *Eibenstock,* granite tectonics, 69-735 ; *Enkenberg hills,* isotypic mictite, 69-2444 ; *Erzgebirge,* augen gneiss, 69-2445, Sn-W deposits, 69-1110, 1111 ; *Fichtelgebirge, eclogites,* 69-3239 ; *Gnadensee, Lake Constance,* recent carbonate sedimentation, 69-2513 ; *Göpfersgrün, Fichtelgebirge,* chlorites, Mg metasomatism, 69-2300, talc, 69-2299 ; *Hagendorf, Bavaria,* beryl, columbite, smoky quartz, sphalerite, zwieselite, 69-3391 ; *Harz, Wolfsberg,* zinckenite, 69-1492 ; *Hohenburg, Siebengebirge,* fluotaramite, 69-3256 ; *Ilmtal-Suhl,* gra tectonics, 69-735 ; *Kaiserstuhl,* pota volcanic rocks, 69-3460 ; *Kirchl* granite tectonics, 69-735 ; *Kle Johannes mine, Oberfranken,* oolitic i ore, 69-1336 ; *Königshain,* granite te nics, 69-735 ; *Lausitz,* granodio tectonics, 69-735 ; *Maubach, F* marcasite, 69-2341 ; *Mechernich, E* marcasite, 69-2341 ; *Nabburg, Bava* fluorite deposit, 69-2993 ; *Oberh* lamprophyre dykes, 69-672 ; *Odenw* diorites, gabbros, 69-3099, ultrab metamorphic rocks, anal., 69-35 *Püllersreuth,* muscovite, 69-33 *Ramberg,* granite tectonics, 69-7 *Rammelsberg, Harz mts.,* base metal deposits, 69-2970 ; *Rhine valley, He berg,* age of groundwater resour 69-1805 ; *Rhön,* potassic volcanic ro 69-3460 ; *Ries Crater, Bavaria,* allotropic form of C, 69-3350 ; *Rossle Unstrut,* kalistrontite, 69-3335 ; *Ru* granite tectonics, 69-735 ; *St. Andreasb Harz mts.,* pyrostilpnite, 69-19 *Saxony,* spring waters, travert 69-3150 ; *Schneeberg, Saxony,* pyrrho 69-1059 ; *Schwarzwald massif,* age granites and pitchblende, 69-9 *Solenhofen, Bavaria,* lithographic li stone, 69-2517 ; *Spessart,* dior 69-3099 ; *Stassfurt,* potash depo 69-3521 ; *Steinach, Bavaria,* con metamorphism of regional metamor rocks, ore minerals in aureole, 69-35 *Swabia,* travertine, 69-3150 ; *Swa Alps,* amino acids in Jurassic r calcareous tufa, 69-2513 ; *Thurin* travertine, 69-3150 ; *Upper Rhine,* deposits, sylvinites, 69-2037 ; *Vogelsb Hesse,* red soil with bauxite nodules f kaolinized basalt, 69-1934 ; *Waidh Bavaria,* aplite, pegmatite, 69-33 *Wiesloch, Baden,* gratonite struct 69-2911 ; *Wölsendorf, Marien m* pitchblende in fluorite veins, antozo two zones of U mineralization, 69-2 *Zechstein basin,* carbonate sedimenta and subsidence, 69-2513
Gersdorffite, X-ray, opt. anisotropy, the stability, 69-1494; *Bavaria,* 69-26 *Mexico,* in Ni deposits, anal., 69-14 *Oslo,* 69-2973
Getchellite, *Iran,* in quartz, anal., 69-1
Geyserite, pore structure, 69-834
Ghallaman v. Mauritania
Ghana, inclusions in diamonds, 69-3 melanites, 69-1936; *Abadzi,* kaolin, 1015 ; *Kibi,* phyllite, kaolinized, 1015 ; *Saltpond,* kaolin, 69-1015
Gibbs free energy, of substances $Fe\text{-}O_2\text{–}H_2O\text{–}CO_2$, 69-3004
Gibbsite, from leaching of aluminosili gels, 69-3038 ; heated, X-ray diffract 69-169 ; *in situ* origin, 69-1929 ; *T* intensity of OH vibration bands, 2885 ; *France,* from granite weathe 69-2878, 2879, from sand and soil granite, anal., IR, t.g.a., 69-1 well crystallized in bauxite, d.t.a., t. X-ray, IR, 69-2516 ; *French Gui* distribution in laterites, 69-19 *Hawaii,* in marine environment, 69-10 *Japan,* from altered biotite, anal., sp X-ray, 69-2294 ; *Yorkshire,* 69-1759
Gifu, Honshu v. Japan
Gila Co. v. Arizona
Giles, South Australia v. Australia

China, Uttar Pradesh v. India
Inde v. France
Kar-Karategin region, Soviet Central Asia v. USSR
Kar range v. Tadzhik SSR
Glacial deposits, study of till by oriented thin sections, 69-3494 ; *Antarctica,* age of till, 69-1799 ; *Kansas,* differentiation by clay minerals, X-ray, 69-1942 ; *Urals,* 69-2525
Glaciation, *Antarctica,* age, 69-1799
Glamorganshire v. Wales
Glasbachgraben, Burgenland v. Austria
Glass, barium, imitation amethyst, 69-3068 ; electrical conductivity and Na and K ratios, 69-3612 ; impact, origin from terrestrial sedimentary rocks, anal., 69-495 ; lead, adsorption of water vapour on, 69-890 ; of tektite comp., IR, 69-3198 ; SiO_2, determination by volatilization, 69-1848 ; *Nevada,* from pantellerite ash-flow, anal., 69-2164, in rhyolite, anal., 69-2406 ; *South Africa,* in kyanite eclogite, anal., 69-2595 ; *USA,* Be and F in volcanic, 69-2159 ; *v.* also volcanic glass
Glauberite, *California,* in evaporites, 69-1324
Glauconite, charge balance between ions, 69-2301 ; release of Fe, K and Ca, 69-1210 ; sorption of Cs and Sr on, 69-2190 ; *Atlantic Ocean,* in green sands, 69-537, in Pliocene or Pleistocene sands, 69-538 ; *England,* volcanic origin, 69-1677, X-ray, d.t.a., anal., 69-1925 ; *Russian platform,* tr. elements in, 69-2292 ; *Volga-Ural,* age, 69–20
Glaucophane, cause of absorption bands, 69-1033 ; *California,* anal., opt., X-ray, 69-3251, in schist, anal., opt., K/Ar age, 69-3284, structure and cation distribution, anal., 69-142 ; *Italy,* in amphibolites, 69-2589
Glaucophanite, *Italy,* 69-3560
Glen Dessary, Inverness-shire v. Scotland
Glendon v. North Carolina
Glenelg, Inverness-shire v. Scotland
Glen Esk, Angus v. Scotland
Gnadensee, Lake Constance v. Germany
Gneiss, average Au in, 69-3102 ; biotite comp. in, 69-3269 ; definition of term, 69-2573 ; modal anal. of coarse augen, 69-1828 ; tr. elements in hornblendes and biotites in, 69-422 ; weathering of Lewisian during Torridonian, anal., 69-1670 ; *Alps,* age, 69-800 ; *Austria,* accessory minerals, 69-819, age, 69-3527, petrology, 69-1582, Rb in biotite, 69-1301 ; *Colorado,* contains rutile and topaz, 69-2610, geology, 69-721 ; *Connemara,* quartz-plagioclase, anal., 69-1709 ; *Finistère,* in granite massif, anal., 69-651 ; *France,* age, 69-1803, granitization, 69-3551, in granite, structural relationships, 69-652 ; *Germany,* contact metamorphism of, anal., 69-3526 ; *Idaho,* in cores of domes, 69-2606 ; *India,* diopside, paragenesis, 69-3578, fabrics and porphyroblasts in, 69-3441, hornblende, structural anal., 69-3585, pebbles in schist, 69-3580, pyroxene, structural anal., 69-3585, scapolite, paragenesis, 69-3578, sheared biotite, structural anal., 69-3585 ; *Italian Alps,* psammitic, petrography, genesis, 69-1711 ; *Italy,* 69-811, conglomeratic, leptynitic, tectonic contact between formations, 69-2587 ; *Malawi,* anal., 69-3407 ; *Massif Central,* geochemistry, anal., 69-3549, glandular granulitic, injection, ortho-, 69-3553 ; *Michigan,* retrograde metamorphism, 69-3592 ; *North Carolina,* anal., 69-1342 ; *Norway,* age, 69-16, anal., 69-3546 ; *Ontario,* lit-par-lit, chem., by metamorphic differentiation, 69-2604, age, 69-1801, Ti in micas as metamorphic grade indicator, 69-1723 ; *Poland,* 69-675, granodioritic, origin, 69-751 ; *Pyrenees,* mineral associations during metamorphism, 69-2581, relation between magnetism and structure, 69-837 ; *Siberia,* albitized, 69-607 ; *Spain,* pyroclastic origin, 69-812 ; *Sweden,* geology, anal., 69-2410 ; *Switzerland,* 69-2590, age, 69-14
—, augen, *Germany,* fabric patterns, origin, 69-2445 ; *Italy,* 69-2587 ; *Spain,* basement rocks, 69-3559
—, biotite, *Malagasy Republic,* petrology, 69-2596
—, biotite-epidote, *Italy,* transformed to granodiorite, anal., 69-2503
—, garnet-biotite, *Minnesota,* anal., 69-2613
—, granite-, *Austria,* accessory minerals, 69-819, Rb in biotites, 69-1301 ; *Cameroon,* age, 69-900 ; *Minnesota,* anal., 69-2613
— hornblende-pyroxene, *Minnesota,* anal., 69-2613
—, hypersthene-cordierite, *Spain,* 69-2583
—, hypersthene-hornblende, *Spain,* 69-2583
—, ortho-, *Spain,* 69-3556, basement rocks, 69-3559
—, sillimanite-garnet-biotite, *New Zealand,* petrography, anal., opt., 69-824
—, syenite, *Brazil,* derived from marly clay, 69-2614
Goa v. India
Godavari delta v. India
Godavari valley, Andhra Pradesh v. India
Godolphin, Cornwall v. England
Goe range, Grand Bassa Co. v. Liberia
Goethite, dehydration in N, X-ray study, 69-170 ; Gibbs free energy, 69-3004 ; on Martian surface, 69-2708 ; stability, 69-2062 ; *France,* in bauxite, t.g.a., d.t.a., X-ray, IR, 69-2516 ; *Germany,* ooliths in Fe ore, 69-1336 ; *Guinea,* converted to chamosite, 69-530 ; *India,* in gossan, 69-2968 ; *Massachusetts,* gem, 69-1246 ; *New Hampshire,* gem, 69-1246 ; *North Carolina,* 69-2681 ; *Saskatchewan,* fibres in carnallite, 69-2536 ; *Urals,* as spherulitic aggregates in ore body, H., d.t.a., anal., origin of texture, 69-584 ; *Vermont,* gem, 69-1246 ; *Yugoslavia,* allcharite identical with, 69-2337
Gogol-Ryshta area, Dagestan v. Russian SFSR
Gold, determination, 69-59, 1380 ; determination by atomic absorption, 69-2791; fire-assay, ion-exchange, spectrochemical determination, 69-2808 ; growth of monocrystals, 69-1179; in common rocks, 69-3102 ; in Earth's crust, 69-2231 ; in jasperoid, minor element associations, 69-3090 ; in meteorites, 69-2231 ; in minerals, 69-3089 ; native, fineness and occurrence, 69-3089 ; neutron activation anal., 69-965, 2803 ; refr. ind. determination, dispersion curve, absorption coefficient, 69-558 ; sample size for anal., 69-2772 ; separation of Te from, 69-1871 ; *Alaska,* 69-1105, cassiterite in Au placers, 69-218, in serpentinite, 69-2948, suggested prospecting area, 69-197 ; *Arizona,* 69-2223 ; *Atlantic Ocean,* in Mn nodules, 69-1319 ; *Bavaria,* Au-quartz veins, 69-2670 ; *Brazil,* in hematite ore, 69-227, resources, 69-2946 ; *Burma,* 69-2018 ; *California,* in continental shelf sediments, 69-2176, in Tertiary river channel gravel, 69-266 ; *Colorado,* geochemical exploration, 69-1103, native, 69-2957 ; *Czechoslovakia,* determination, 69-1380, native, 69-871 ; *France,* 69-2021 ; *Germany,* 69-2970 ; *Indian Ocean,* in Mn nodules, 69-1319 ; *Kazakh SSR,* abundances in sulphide ores, 69-264 ; *Malagasy Republic,* 69-1115 ; *Maine,* placer, 69-1780 ; *Massachusetts,* in beach sand, 69-2543 ; *Nevada,* 69-462, 2226, anomalous concentration, 69-265 ; *New South Wales,* in Bi-Mo ores, 69-225 ; *Oregon,* in sediments on continental shelf, 69-392 ; *Portugal,* native, in W-Sn ores, 69-2011 ; *Romania,* 69-3390 ; *Russian SFSR,* 69-3078, distribution in sulphides in skarns, 69-1104 ; *Siberia,* 69-2984 ; *South Africa,* myrmekitic intergrowth with linnaeite and pyrrhotite, 69-1130 ; *Spain,* veins as fossil fumaroles, 69-258 ; *Tadzhik SSR,* abundances in sulphide ores, 69-264 ; *USA,* occurrence and production, 69-1994, migration in ground waters, residual enrichment, 69-3155 ; *Urals,* associated with magmatism, 69-3392 ; *Utah,* native, 69-2019 ; *Uzbek SSR,* in Cu-Bi ores, 69-263 ; *Western Australia,* Au-krennerite assemblage disproved, 69-261, development of resources, 69-196 ; *Wyoming,* in mine waste, 69-2962 ; *Zambia,* occurrences, 69-1589
Gold Acres, Lander Co. v. Nevada
Gold hill, Boulder Co. v. Colorado
Gold ore, *Alaska,* 69-260 ; *Brazil,* 69-2027 ; *Fiji,* lode structures, 69-254 ; *Spain,* syngenetic with ignimbrites, 69-258
— -Ag-Pb-Cu ore, *Western Australia,* 69-259
— -Cu ore, *Queensland,* mineralogy, texture, genesis, 69-257
Goldmanite, synthesis, 69-1209
Goldongri v. India
Golfe de Lion v. Mediterranean Sea
Gombe v. Nigeria
Gomera Is., Canary Is., v. Atlantic Ocean
Gondite, term discussed, 69-231
Gongen valley v. Japan
Gongo Sôco quadrangle, Minas Gerais v. Brazil
Goniometry, application to gemmology, 69-3057 ; universal stage for opt. investigation of mineral grains, 69-923
Göpfersgrün, Fichtelgebirge v. Germany
Gordonia, Cape Province v. South Africa
Gore *v.* tonstein
Gorno, Bergamo Alps v. Italy
Gorny Altai, Siberia v. Russian SFSR
Gortdrum v. Ireland
Gösleswand, Tyrol v. Austria
Gossan, *India,* 69-2968 ; *Transvaal,* sulphide rich, 69-2982
Gosse Pile, South Australia v. Australia
Gouveneur mining district v. New York
Grabels v. France
Grabiszyce v. Poland
Graftonite, IR, 69-2638 ; structure, 69-189
— –beusite series, 69-2395
Grain growth, in porous compacts, 69-279
Grainsgill, Cumberland, v. England
Grain size, influence on isotope determinations, 69-1382
— — analysis, differentiation of sand types, 69-766 ; sedimentation methods, 69-2753
Grand-Auverné v. France
Grand Bassa Co. v. Liberia

Grand Co. v. Colorado ; *Utah*
Grande Vasière v. Atlantic Ocean
Grandfather mt. v. North Carolina
Grand Paradis, Alpes Graie v. Italy
Granite, average Au in, 69-3102 ; biotite in, 69-1631, 3269; cause of rapakivi texture in, 69-3440 ; determination of Sr and Ba, 69-2809 ; heat capacity, 69-840 ; heat of cooling and crystallization, 69-1744 ; model for hydrothermal origin, 69-744 ; Pb isotopes in, 69-631 ; RE in accessory minerals, 69-378 ; salt from weathering, 69-2208 ; shock-wave equations, 69-2626 ; water determination by IR, 69-1890 ; *Alpes Maritimes*, intrusive, xenoliths in, 69-3370 ; *Angola*, alteration profiles, 69-1010 ; *Antarctica*, petrology, anal., 69-712 ; *Aquitaine*, age, 69-1 ; *Argentina*, related metalliferous deposits, 69-201 ; *Baveno*, age, 69-12 ; *Colorado*, age, 69-2713, 2714, anal., tr. elements, 69-1280, in ring complex, anal., age, 69-3451 ; *Connecticut*, 69-3433 ; *Cornwall*, anal., XRF, age, 69-3365, distribution of SiO_2, Na, K, Li, Fe, Mg, 69-359, feldspar megacrysts in, 69-1565 ; *Czechoslovakia*, types of kaolin in, 69-2859 ; *Dartmoor*, emplacement of, 69-733, petrogenesis, associated metamorphism, metasomatism and mineralization, 69-1566 ; *Devon*, distribution of SiO_2, Na, K, Li, Fe and Mg, 69-359 ; *Durham*, in borehole, anal., 69-1563 ; *Elba*, age, 69-905 ; *England*, in borehole, 69-1673 ; *Finistère*, occurrence, structure of, anal., 69-651 ; *France*, age, 69-2723, alteration and chem. variation in, 69-1286, anal., petrography of facies, 69-2416, bordered by migmatites, 69-3554, comp. controlled by sediments, 69-3448, geochemistry of alteration, d.t.a., X-ray, anal., 69-1285, gibbsite from weathering, 69-2878, 2879, in basement complex, anal., 69-654, leaching, anal., 69-1329, radioactive inclusions in, 69-3097, structural relationships, formation of, 69-652, two mica, U in, 69-2171, weathering of, 69-2191 ; *Germany*, calc-alkali, Zr/Hf in, 69-1279, joint pattern, 69-2445 ; *Hungary*, geochemical statistics, origin, 69-1288, geochemistry, 69-1281 ; *Hyderabad*, texture, metasomatic origin, 69-3465 ; *India*, zircons in, 69-3419 ; *Ireland*, layering in, 69-1621 ; *Italy*, accessory minerals in, 69-3381, age, 69-2726, age and accessory zircon morphology, 69-1809, Ca in, 69-3096, Fe, Mg and Mn in, 69-3098, heavy minerals, 69-2257 ; *Ivory Coast*, alteration profile, 69-2877 ; *Karelia*, basement, fusion and mobilization of, 69-3463 ; *Kazakh SSR*, hypabyssal, characteristics, 69-736, pegmatite in, 69-2170 ; *Korea*, limestone xenoliths in, 69-1126 ; *Loire*, in granitic-migmatitic massif, 69-653 ; *Macao*, ages, 69-2730 ; *Malawi*, pre-kinematic, 69-3407 ; *Massif Central*, age, 69-2724, anal., spectrography, 69-657 ; *Mont Blanc*, regional metamorphism, stilpnomelane in, 69-3562 ; *New South Wales*, Bi-Mo ores in, contraction joints and ore localization, 69-225, Cu-Mo minerals at junction with hornfels, 69-792, inclusions in basic pipes, chem., petrography, 69-3428 ; *Nigeria*, gravity interpretation, 69-1623, K, Li, Na, Nb, Rb, Ta, Ti in, 69-380 ; *Norway*, bavenite in, 69-1758, Rb-Sr isotopic studies, 69-2727 ; *Ontario*, age, 69-1801 ; *Poland*, direction of aplites in, 69-734, tectonics, 69-734 ; *Queensland*, age, 69-6, age, Sr isotopes, 69-2719 ; *Rhode Is.*, dyke, 69-3433 ; *Sardinia*, petrography, genesis, 69-2430 ; *Saskatchewan*, reference sample for Th isotope comp. of crustal rocks, 69-1377 ; *Scotland*, CIPW norms and mesonorms compared, 69-1845, Newer, 69-1704, structure, 69-1618 ; *Siberia*, geochemistry, 69-1287, pyrite ores metamorphosed by, 69-2000 ; *South Africa*, geochemistry, origin, 69-3358, hypersthene, age, 69-3571, inclusions in quartz of, 69-2448, radiometric surveys over, 69-2939 ; *South-West Africa*, Na, K, Mg, Li, Rb, Tl and Cs in, 69-1636 ; *Spain*, cooling rates, origin from apatite habit, 69-2502, crushed, 69-3556 ; *Sweden*, age, 69-2731, comagmatic and post-orogenic, 69-2411, geology, anal., 69-2410 ; *S.W. England*, Cl and F in, 69-3095, K-feldspar in, 69-1634 ; *Tasmania*, post-crystallization movement of isotopes, 69-1282 ; *Texas*, pluton, Th and U in, crystallization of, 69-1625 ; *Tien-Shan*, distribution of Be, 69-361 ; *Trentino*, anal., 69-3385 ; *USSR*, Be mineralization associated with, 69-1139 ; *Vosges*, age, 69-8 ; *Washington*, age, 69-2718 ; *Wyoming*, in ring complex, anal., age, 69-3451
—, alaskite, *Karelia*, origin, 69-3463
—, albite, *Oregon*, anal., 69-2473
—, alkali, *Greenland*, anal., 69-635 ; *Hungary*, biotite in, 69-3267, *Rajasthan*, anal., 69-693
—, biotite, free and combined water in, 69-1890 ; rare element distribution, 69-1289 ; *Brazil*, in subvolcanic complex, 69-727 ; *Siberia*, hybridization, petrography, 69-1644
—, biotite-hornblende, *Colorado*, in ring complex, anal., age, 69-3451 ; *Wyoming*, in ring complex, anal., age, 69-3451
—, biotite-muscovite, Sn and Zn in biotites, 69-3269
—, hornblende, *Nigeria*, in ring complex, anal., 69-3406 ; *Vietnam*, anal., petrography, 69-3425
—, microcline, *France*, origin, 69-2422
—, orbicular, *Russian SFSR*, sills, anal., 69-3444
—, rapakivi, *Estonian SSR*, in drill core, 69-3393 ; *Finland*, O isotope ratios in minerals, 69-1295 ; *Latvian SSR*, in drill core, 69-3393
—, riebeckite, *Siberia*, hybridization, petrography, 69-1644
Granite Falls, Montevideo area v. Minnesota
Granite mt., Seward peninsula v. Alaska
Granite porphyries, *Hungary*, geochemistry, 69-1281
Granitic intrusions, explanation for 'relict dykes' in, 69-3445
— massif, *France*, structure and distribution of units in, 69-3448
— melts, separation of Mo, 69-351
— rocks, anorthosite kindred, petrogenetic model, 69-746 ; mesonorms of anal., 69-1845 ; U distribution by neutron activation, 69-386 ; *Azov*, zircons in, 69-2256 ; *British Isles*, Caledonian, regional variation in comp., 69-3094 ; *California*, biotite crystallization in, anal., 69-3265, intrusive, age, anal., 69-3434 ; *Cornwall*, banding in, 69-3457 ; *Czechoslovakia*, anal., genesis, 69-2275 ; *Denmark*, petrophysical properties, 69-2624 ; *England*, F and Cl in, 69-1283 ; *Enisei range*, age, 69-1
France, origin, 69-2422 ; *India*, all rims in, 69-3535, intrusions red crust density, 69-2696 ; *Italy*, anatase weathering products, 69-2557 ; *Kaz SSR*, quartz density in, 69-329 *Nevada*, sphene in, 69-3205, zircons 69-3204 ; *Sardinia*, petrography, 69-16 anal., origin, 69-1640 ; *Siberia*, str tures in, 69-2459 ; *Tadzhik SSR*, bitun in, 69-2169, Sr in, 69-1289 ; *Tra baikalia*, geochemistry, 69-2172 ; *US* Be in, 69-1284 ; *Vietnam*, age, 69-237
Granitization, decrease in ^{18}O, 69-3 *Antarctica*, 69-2487 ; *France*, history 69-652 ; *India*, 69-3583, 35 *Norway*, 69-3546 ; *Siberia*, regio 69-3565 ; *USSR*, 69-3566
Granodiorite, *Antarctica*, anal., 69-7 *Brazil*, 69-2946 ; *California*, anal., ho blende in, 69-2281 ; *Czechoslovakia*. 69-2721 ; *Denmark*, weathering produ anal., 69-1017 ; *Fiji*, age, 69-7 ; *Fra* origin, 69-2422 ; *Germany*, anal., X UV, 69-3099 ; *Italy*, from gneiss, an 69-2503 ; *Ivory Coast*, age, 69-27 *Montana*, anal., alkali feldspar 69-2309, zoned, anal., 69-2478 ; *Pola* petrography, origin, 69-751 ; *Pu Rico*, anal., 69-3436 ; *Pyrenees*, cause skarn mineralization with scheel 69-2010 ; *Rajasthan*, metasomatic orig 69-3468 ; *Snowdonia*, by remelting quartz latite, 69-732 ; *Soviet Far E* model for genesis, 69-1637 ; *Tien-Sh* distribution of Be, 69-361 ; *New Zeala* stock, petrology, anal., 69-704, xenolit petrology, anal., 69-707 ; *Saudi Ara* anal., 69-1137; *Washington*, age, 69-2
—, biotite, *India*, modal variability, 3442 ; *Italy*, anal., 69-3385
Granodioritization, *Italy*, of gneiss, an 69-2503
Granofels, *Italian Alps*, 69-807
Granogneiss, *Italian Alps*, 69-807 ; *It* 69-811
Granophyre, *Argyllshire*, granophyric vei anal., 69-2564 ; *Bihar*, xenolithic, orig 69-3466 ; *Ireland*, origin of ring-dy anal., tr. elements, 69-750 ; *Lake Distr* 69-2415 ; *New Jersey*, with syenite, 69-3458 ; *Pennsylvania*, variation in Ta, Zr, Hf, U Th, Cs, 69-382 ; *Tasma* variation in Nb, Ta, Zr, Hf, Th, U, 69-382
Granophyric texture, *India*, in compos dyke, 69-3446
Granosyenite, *Italy*, anal., petrograp 69-3384
Grant Co. v. Oregon
Granulite, accessory minerals in, orig 69-1701 ; associated with eclogite, 802 ; formation, influence of wa 69-2053 ; *Alaska*, inclusions in la 69-1651 ; *Antarctica*, quartz and sapp ine in, 69-825 ; *Australia*, high low *P* terranes, geochemistry, 69-134 *Austria*, accessory minerals, 69-8 older than surrounding gneiss, mo anal., 69-740 ; *France*, lens in me morphic basement, 69-2579 ; *Ind* garnetiferous in khondalite, 69-82 *New South Wales*, in basic pipes, an chem., petrography, 69-3428
—, manganese, *India*, in khondalite, 823
—, pyroxene, *Canada*, petrogenesis, ori of charnockitic rocks, anal., 69-1722

phic texture, *New Zealand,* in xenoliths, -707
phite, as interstellar matter, 69-477 ; ectronic properties, 69-848 ; from henite, in meteorite, 69-480 ; inter-ellar, H and O impurities in, 69-476 ; n-ideal crystals, X-ray, 69-146 ; O traction by reduction of, 69-418 ; *ustria,* deposit, 69-1020 ; *Finland,* nino acids in, 69-1259 ; *Germany,* in etamorphic aureole, 69-3526 ; *New ealand,* in gneiss, opt., physical data, 824 ; *Transvaal,* in gossan, 69-2982
phitization, controls U ore deposition, 69-1270
tonite, low-*T* dimorph of jordanite, 69-020 ; structure, 69-167 ; *Germany,* struc-ire, 69-2911 ; *Spain,* in pyrite, anal., pt., X-ray, 69-2348
ubünden v. Switzerland
vel, beach, particle rounding in, 69-487 ; *California,* Au-bearing in Tertiary iver channel, 69-266
vity measurements, *Nevada,* 69-1386 ; *Nigeria,* granite complex, 69-1623
study, *India,* 69-2696
ywacke *v.* greywacke
at Barrier Reef, Queensland v. Australia
at Bernera, Inverness-shire v. Scotland
at Boulder mine, Kalgoorlie v. Australia
ater Caucasus v. USSR
at Kavir v. Iran
at Lake, Tasmania v. Australia
at Plains v. USA
at Whin sill v. England
REECE, *Attica, Laurion,* Pb-Zn ores, 69-238 ; *Chios,* Sb-W-Hg ore deposits, 69-204 ; *Dafni,* bauxite, 69-2192 ; *Lake Achinos,* clays from recent sediments, 69-1938 ; *Laurium,* Pb-Zn ore, 69-2975, penfieldite, 69-1488 ; *Mont Vourinos, Macedonia,* folds in peridotites, 69-1580 ; *Rhodes,* albite, 69-2314
REENLAND, *Cape Parry,* bytownite, 69-3291 ; *Fiskenaesset,* sapphirine structure, 69-2907 ; *Ilímaussaq,* chalcothallite, 69-1528, ilimaussite, 69-3352 ; *Ilímaussaq peninsula,* microsyenite dykes, 69-634, petrochemistry of alkaline intrusion, 69-635 ; *Kap Edvard Holm,* layered complex, 69-3449 ; *Skaergaard,* distribution of P in basic layered intrusion, 69-362, Ni/Co and mafic index in igneous rocks, 69-374, Zr and Hf, in intrusion, 69-2161
reenockite, *Vietnam,* in Pb-Zn ore, 69-237
reen River basin v. Wyoming
reenschist, *India,* origin in ultrabasics, 69-3573 ; *Kamchatka,* anal., 69-420
reenstone, *mid-Atlantic ridge,* magnetism and petrology, 69-864 ; *Sweden,* geology, anal., 69-2410 ; *Turkey,* complex, genesis, 69-2495 ; *Virginia,* anal., origin, 69-2477
reigite, 69-564 ; *Mexico,* anal., cell size, sp.gr., 69-2342
reisen, *Alaska,* Sn in, 69-2948 ; *Lake District,* anal. of muscovite, 69-2415 ; *Massif Central,* anal., 69-657 ; *USSR, T* and comp. of solutions forming, 69-349
reisenization, *S.W. England,* 69-3095 ; *Transbaikalia,* stages and ages, 69-2736
renada v. Spain
renville, *Ontario v. Canada*
ressoney-Piemonte *v. Italy*
reywacke, *California,* jadeitized, anal., 69-2278 ; *France,* age, 69-1803 ; *Haute-Savoie,* mineral facies, origin, 69-1693 ; *New South Wales,* volcanic, metamorphosed, 69-779
Gritstone, in roads, resistance to polishing, 69-839
Grospydite, *Siberia,* xenoliths in kimberlite, petrology, anal., 69-1586
Grosseto, Tuscany v. Italy
Grossular, synthesis, 69-1209 ; *Italy,* in manganiferous rocks, anal., 69-1446
— , indium–, synthesized, 69-2104
— -spessartine, *India,* anal., sp.gr., opt., 69-503
Ground-water *v.* water, ground-
Groutite, *France,* 69-2985
Grunerite, *Labrador,* in Fe formation, anal., opt., unit cell, sp.gr., 69-2279 ; *Quebec,* in Fe formation, anal., 69-2280
— –cummingtonite series, nomenclature, 69-3246
Guajira peninsula v. Colombia
Guano, *Vietnam,* cause of P enrichment, 69-364
Gudzhir, Siberia v. Russian SFSR
Guettardite, *Ontario,* new mineral, anal., X-ray, VHN, 69-2384
Guiana shield v. South America
GUINEA, weathering of basic rocks, 69-2875 ; *Kaloum peninsula,* chamosite in sands, 69-530
Guissar v. USSR
Gujarat v. India
Gula, Siberia v. Russian SFSR
Gulf of Aden v. Indian Ocean
Gulf of Alaska v. Pacific Ocean
Gulf of Bothnia v. Finland
Gulf of California v. Mexico
Gulf of Cap Breton v. France
Gulf of Maine v. USA
Gulf of Mexico v. North America
Gull Wing Lake, Ontario v. Canada
Gutîi, Carpathians v. Romania
GUYANA, diamond mining, 69-330
Gwendraeth valley, Carmarthenshire v. Wales
Gyeongsang v. Korea
Gypsum, deuterium in water of crystallization, 69-3152 ; –anhydrite transition point, 69-2083 ; reduction with charcoal, 69-1144 ; *California,* in evaporites, 69-1324 ; *Cumberland,* solution by upward flowing water, 69-891 ; *France,* in salt marshes, crystal growth, 69-595 ; *Italy,* diagenetic, 69-3520 ; *Lipari Is.,* in altered volcanic rocks, 69-1678 ; *Moldavian SSR,* S isotopes in, 69-2197 ; *New York,* in dolomite, 69-2682 ; *Poland,* bacterial alteration to sulphur, 69-2991 ; *Quebec,* localities, 69-2673 ; *Ross Ice Shelf,* in soils, 69-411 ; *Thailand,* 69-2039 ; *Utah,* ion activity in brine, 69-1358
Gyrolite, stability, 69-303 ; *Italy,* in basalt, X-ray, anal., formula, 69-1426

Haddo House, Aberdeenshire v. Scotland
Hafnium, neutron activation anal., 69-2804 ; separation from irradiated sample, 69-1279 ; *Germany,* in granites, 69-1279 ; *Pennsylvania,* variation in diabase-granophyre suite, 69-382 ; *Skaergaard,* distribution in intrusion, 69-2161 ; *Tasmania,* variation in diabase-granophyre suite, 69-382
— compounds, oxide, high pressure modification, X-ray, density, 69-1183
Hagendorf, Bavaria v. Germany
Haiti v. West Indies
Halides, NaCl-type alkali, Anderson-Grüneisen parameter δ for Born-Mayer potential, 69-2623
Halite, determination of B in, 69-1851 ; plastic flow influenced by electric field, 69-3611 ; *California,* in evaporites, 69-1324 ; *Sicily,* 69-3115 ; *Utah,* ion activity in brine, 69-1358 ; *Wyoming,* with trona, 69-1145
Halloysite, associated with pitchblende, anal., X-ray, d.t.a., 69-2862 ; dimethyldioctadecyl ammonium derivatives, 69-2831 ; hydrated, anal. by small angle X-ray scattering, 69-81 ; hydrothermal origin, 69-2876 ; O–H stretching vibrations, IR, X-ray, 69-2844 ; porosity spectrum, 69-2754 ; reaction with $Ca(OH)_2$, 69-1917 ; studies in *USSR,* 69-1921 ; *Austria,* in graphite deposit, origin, 69-1020 ; *Cameroon,* in bauxite, X-ray, EM, 69-2861 ; *Hawaii,* in marine environment, 69-1008 ; *Ivory Coast,* d.t.a., X-ray, 69-2863 ; *Wyoming,* with alunite, 69-2539 ; *Yugoslavia,* from alteration of ultramafic rocks, anal., 69-1019
Halotrichtite, *Norway,* 69-1757
Hamersley, Western Australia v. Australia
Hampshire basin v. England
Hampshire Co. v. Massachusetts
Handeni v. Tanzania
Hanksite, *California,* in Quaternary deposits, 69-2538
Hanléite, replaced by knorringite, 69-2390
Hanover v. Germany
Hard materials, analysis of, 69-27
Hardin Co. v. Illinois
Hardness, micro-, of magnetite, 69-3311 ; of metacolloidal to crystalline pyrite, 69-249 ; of pyrrhotite and troilite, 69-3595 ; of ludwigite–vonsenite series, 69-3605
Hardystonite, *New Jersey,* 69-2679
Harford Co. v. Maryland
Harney Co. v. Oregon
Harstigite, unit cell formula, related to aminoffite, 69-554
Harz v. Germany
Harzburgite, *Brazil,* pre-metamorphism, 69-2486 ; *Bushveld,* modal, grain size, sorting anal., 69-737 ; *California,* anal., 69-3202 ; *Spain,* anal., 69-1572
Harz mts. v. Germany
Haslemere, Surrey v. England
Haspelberk v. Czechoslovakia
Hassan, Mysore v. India
Hassi-el-Fogra v. Mauritania
Hastingsite, *France,* in breccia and dyke, anal., opt., 69-517 ; *Karelia,* comp., opt., 69-2732 ; *Siberia,* anal., opt., X-ray, 69-3258
Hatay v. Turkey
Hatchite, Cu analogue, 69-1062 ; structure, 69-167 ; *Lengenbach,* anal., 69-2352, comp., crystallog., 69-2354
Hausmannite, equilibrium with rhodochrosite, 69-3031 ; *Italy,* diagenetic, 69-3520
Haute-Loire v. France
Haute-Savoie v. France
Haute Vienne v. France
Hautes-Alpes v. France
Hautes Pyrénées v. France
Haut-Rhin v. France
Haüyne, *Italy,* in geode in tuff, 69-3388
Haüynite, *Italy,* petrography, 69-2437
Haüynophyre, *Italy,* petrography, 69-2437
Hawaiian Is. v. Pacific Ocean
Heat flow, and descending mantle convective flow, 69-757
Heavy minerals, in sediments, weighting coefficients in transportation study, 69-3489 ; *Burma,* in river sediments, 69-2533 ; *France,* in borings, 69-3493, in Eocene red clays, 69-646 ; *Illinois,* in

Heavy mineral, *(contd.)*
sands, 69-2550 ; *India,* and sediment correlation, 69-3504, in sediments, 69-776 ; *Italy,* in granites, mineralogy, 69-2257 ; *Massachusetts,* in beach sand, 69-2543 ; *Nevada,* in stream sediments, 69-2545; *Poland,* in silt, loess, boulder clay and limestone, 69-775 ; *Taiwan,* 69-777, 778, reconnaissance, 69-3323 ; *Wyoming,* nonopaque, reflect on volcanism and tectonism, 69-2547
Heazlewoodite, *Ontario,* X-ray, 69-1775 ; *Quebec,* in serpentinite, 69-1602
Hebrides v. Scotland
Heckla Hoek, Spitzbergen v. Arctic
Hectorite, adsorption of heavy metal cations and solubility, 69-1918 ; charge balance between ions, 69-2301 ; chemical equilibrium, 69-88 ; dimethyldioctadecyl ammonium derivatives, 69-2831 ; dissolution, mechanism, 69-87 ; free energy calculation, 69-88 ; stability, in weakly acidic solutions, 69-87, 88, 1918
Hedenbergite, *Japan,* coexisting with epidote in skarn, anal., opt., 69-2277
Hedleyite, 69-3026
Heemskirk, Tasmania v. Australia
Heidelberg v. Germany
Heidornite, structure, X-ray, 69-1968
Heliodor, *New Hampshire,* 69-1246 ; *Western Australia,* localities, 69-1245
Helium, implantation into olivine and enstatite, 69-1373 ; in achondrite meteorites, 69-3179 ; in hydrocarbon gases, 69-447 ; migration in pitchblende and uraninite, 69-1372 ; *Hawaii,* radiogenic, in inclusions, 69-912
— isotopes, in stony meteorites, 69-475
Helvite, anal., 69-2799 ; determination of S coordination in, 69-551
Hemafibrite, crystallog., X-ray, var. of synadelphite, 69-2374
Hematite, Fe^{2+}, Fe^{3+} determination by XRF, 69-2796 ; Gibbs free energy, 69-3004 ; growth of large crystals, 69-2068 ; —ilmenite system, super-exchange mechanisms, 69-1065 ; magnetic structure, 69-1948 ; magnetic studies of intergrowths with maghemite, 69-1752; polycrystalline, elastic constants of, 69-2628 ; produced on magnetite, topotactic relations, 69-3599 ; relationship with magnetite in Fe ore, 69-2029 ; n.r.m. of single crystals, 69-3608 ; shock-wave equations, 69-2626 ; topotactic formation from goethite, 69-170 ; *Austria,* in schist, 69-2591 ; *Elba,* epitaxial relationship with magnetite, 69-835 ; *France,* in bauxite, d.t.a., t.g.a., X-ray, IR, 69-2516 ; *Mexico,* magnetite produced on by reduction, 69-2061 ; *North Carolina,* in metamorphic rocks with Fe-rich muscovite, 69-1727 ; *Oslo,* 69-2973 ; *Quebec,* localities, 69-2673 ; *Saskatchewan,* plates in carnallite, 69-2536 ; *Swaziland,* mined for 28,000 years, 69-195
— ore, *Brazil,* anal., itabirite as source and host, Au mineralization in, 69-227 ; *Russian SFSR,* blastomylonite, 69-2032
Hematolite, structure, 69-1082
Hemimorphite, *Vietnam,* in Pb-Zn ore, 69-237
Hendricksite, *New Jersey,* 69-2679
Hen Is., North Is. v. New Zealand
Henritermiérite, structure, 69-2890 ; *Morocco,* new mineral, anal., opt., d.t.a., t.g.a., X-ray, formula, 69-3347
Herald Cays, Coral Sea v. Pacific Ocean
Hérault v. France
Hercynite, solid solution stability, structure, 69-2916 ; X-ray determination of O parameters, 69-1962 ; *Bulgaria,* in ultrabasites, 69-3312 ; *Germany,* in metamorphic aureole, 69-3526
Herderite, *Maine,* gem, 69-1246 ; *New Hampshire,* gem, 69-1246 ; *Virginia,* in pegmatite, 69-879
Herkimer Co. v. New York
Hermanovice, Silesia v. Poland
Heron Is., Queensland v. Australia
Herschelite-phillipsite, *Italy,* in tuff, opt., d.t.a., X-ray, 69-3388
Herzenbergite, heat and free energy of formation, 69-2050
Hesse v. Germany
Hessite, anal., 69-1497 ; *Colorado,* 69-2957
Heterogenite, CoOOH in, 69-2338
Heteromorphite, diagnostic features, 69-3330
Heulandite, structure refinement, 69-159 ; thermal props. compared with clinoptilolite, d.t.a., 69-2322 ; thermal stability, 69-2323 ; *Kazakh SSR,* in sedimentary rocks, 69-2321
Hewettite, scanning EM, 69-933
Hexahydrite, *Ross Ice Shelf,* in soils, 69-411
Hexastannite, *Bolivia,* anal., reflectivity, 69-1530
Hiåsen, Bamble v. Norway
Hida, Honshu v. Japan
Higasi-akaisi v. Japan
High Atlas v. Morocco
High Cascade range v. Oregon
Highlands v. Scotland
Highwood v. Montana
Hillebrandite stability, 69-303
Hillsborough v. North Carolina
Himachal Pradesh (H.P.) v. India
Himalaya v. India
Himalaya mine, San Diego Co. v. California
Himalayas v. Asia ; India
Hingoria, Broach, Gujarat v. India
Hinsdalite, anal., X-ray, 69-3338
Hinuera, North Is. v. New Zealand
Hirose, Honshu v. Japan
Hissar range v. Tadzhik SSR
Hoboken v. New Jersey
Hocartite, *Bolivia,* with stannite, opt., X-ray, anal., 69-611 ; *France,* 69-611
Hocaya v. Bolivia
Hodruša v. Czechoslovakia
Hoernesite *v.* hörnesite
Høgetveit, Evje v. Norway
Hohe Tauern v. Austria
Hohenburg, Siebengebirge v. Germany
Hollandite, in synthetic sanidine, structure, 69-150
Holmium, *New Zealand,* in stream sediments, 69-397
Holyoke v. Massachusetts
Honduras, poughite, 69-620
Hon Khoai v. Vietnam
Hon Nghê Is. v. Vietnam
Honshu v. Japan
Hon Tre v. Vietnam
Hon Trung Long Is. v. Vietnam
Hope, San Bernardino v. California
Hope lake, Ontario v. Canada
Hopkins Co. v. Texas
Hornblende, actinolitic, stability, 69-2113 ; B indicator in Mg skarns, 69-3084 ; comp. in jadeite-glaucophane metamorphism, 69-520 ; in granulite facies, comp., reactions, 69-3249 ; mechanism for orientation of fabrics, 69-2489 ; salt from weathering, 69-2208 ; selected anal., 69-2283 ; *Andhra Pradesh,* chlorine in, anal., 69-3248 ; *Atlantic Ocean,* in sands, weighted values, 69-3489 ; *California,* in granitic rocks, opt., sp.gr., chem., X- 69-2281, Ta in coexisting biotite 69-2163 ; *Germany,* cummingtonitic metamorphic rocks, anal., opt., 69-3 Mn-rich in trachyte, anal., opt., X- 69-3256 ; *India,* and coexisting augit metamorphosed gabbro, 69-3543 ; *Ja* in amphibolite, anal., opt., 69-22 *Massachusetts,* in amphibolite, anal.. 3253 ; *New Zealand,* in xenolith, a 69-710, tr. element anal., 69-3083 ; *S Japan,* in glass, opt., 69-2460 ; *Sib* anal., opt., X-ray, 69-3258 ; *Skye,* 69-1706, ferrotschermakitic, anal., 1441 ; *South Africa,* in kyanite eclo anal., 69-2595 ; *Sweden,* Ti and Mn in existing biotite and, 69-2154 ; *Swi land,* age, 69-14, fabric in amphibole 2489 ; *Ukrainian SSR,* in cordie polyamphibole rock, anal., 69-521 ; Mn in, 69-1294
Hornblendite, *Bihar,* origin, 69-34 *Rajasthan,* anal., 69-693
Hörnesite, belongs to vivianite group, 2376
Hornfels, *Antarctica,* petrology, anal., 712 ; *Cornwall,* Cu in, 69-421, 1297 and Pb in, 69-1296 ; *Cumberl* garnetiferous, 69-2415 ; *Honshu,* al dine-bearing, anal., 69-2563 ; *New S Wales,* Cu-Mo minerals at granite j tion, 69-792
Horní Benešov, Jeseník mts. v. Czechoslov
Horní Město, Jeseník mts. v. Czechoslov
Horobetsuite, 69-2350
Hortonolite, structure, refined by 3-di sional least squares, 69-136
Hosokura mine, Honshu v. Japan
Hot Creek range, Nye Co. v. Nevada
Hot Spring Co. v. Arkansas
Hot Sulphur Springs quadrangle, Grand v. Colorado
Houghton v. Maine
Hound Is., Keku strait v. Alaska
Houston v. Texas
H.P. = Himachal Pradesh
Hrubý Jeseník mts. v. Czechoslovakia
Hsinkiang v. Taiwan
Hubble, 10^9 light yrs, proposed t 69-886
Hübnerite, *France,* 69-2985
Hudakake, Honshu v. Japan
Huelva v. Spain
Huka, North Is. v. New Zealand
Hulsite, Sn in, Mössbauer spectrosc 69-1040
Humate, *Florida,* sorption of me 69-1334
Humboldt creek, Seward peninsula v. Al
Humic acid, modifications of IR spectr 69-1330 ; *Atlantic Ocean,* mol. distribution in clays, 69-1318 ; *Carolina* in soils, pyrolysis of, 69-31 *Pacific Ocean,* in sediments, 69-1312
— substances, *Florida,* in recent sedime 69-3128
Humite, crystallog, twinning, 69-2254
— minerals, stoichiometric, no polytyp anal., 69-3203 ; structure, 69-2889
Hundholmen v. Norway
Hungary, palaeomagnetism of lavas, 2659 ; sediments of the "Schlier" fo tion, 69-1681 ; *Börzsöny mts.,* volc rocks, 69-1583 ; *Cserhát hills,* pyro andesite complex, 69-1547 ; *Fazekas Mórágy,* granite geochemistry, 69-12 *Felix II* and *Nyíreskút mines,* aluminite, 69-1506 ; *Tokaj mts.,* deposits, 69-1091, river-water a

GARY, *(contd.)*
1362, Sr in rocks, 69-3105, Sr isotopes
igneous rocks, 69-1291 ; *Velence mts.*
tite, 69-3267 granite geochemistry,
1288, granitic rocks, 69-1281 ;
isonta, roundness of grains, palaeo-
ography, 69-1683
ting Hill quarry, Montgomery Co. v.
aryland
tite, *Turkey,* recent, 69-1768
lbutite, *Bohemia,* in pegmatite, opt.,
-ray, anal., origin of, 69-608
chinsonite, structure, 69-167 ; *Lengen-*
ich, anal., 69-2352
na v. Sweden
ragerdi v. Iceland
loclastites, *Sicily,* comp., artificial
lour, 69-3375, petrography, chem.,
3-2427 ; *Kurile Is.,* comp., 69-2492
lophane, anal., 69-1476
losiderite, structure, refined by 3-
imensional least squares, 69-136
latogenetic alteration, *Shetland Is.,* of
uartz-feldspar metasediment and origin
f kaolinization, 69-103
derabad v. India
dration, of silicic rocks by phenocrysts,
9-3356
drobasaluminite, *Kansas,* with gypsum
nd iron, dehydration study, X-ray,
t.a., 69-596
drobiotite, cation exchange in inter-
ayers, 69-91 ; counter ion distribution,
9-91
drocarbons, in sediments and oils,
rigin, 69-3124 ; not cause of smokiness
n quartz, 69-3295 ; *Cameroon,* diagenesis
n sediments, 69-2189 ; *Derbyshire,* ali-
yclic, anal., diagenesis, 69-3093, in
imestone fissure, 69-3615 ; *France,* in
eptarian nodules, origin, 69-3127 ;
Montana, isoprenoid in oil, origin,
9-3126 ; *Scotland,* in Carboniferous
hale and torbanite, 69-3113
gas *v.* gas, hydrocarbon
drogarnet, Sr-In-, synthetic, 69-2104 ;
Colorado, in biotite in batholith and
ntruded rocks, 69-2305 ; *Italy,* physical
roperties, opt., X-ray, IR, 69-1413
drogen, implantation into olivine and
nstatite, 69-1373 ; in inclusions, 69-
367 ; in interstellar graphite, 69-476
chloride, in smoky quartz, 69-3295
isotopes, fractionation factors, 69-2198 ;
ndicators of characteristics of petroleum
edimentation basins, 69-457 ; in stony
neteorites, 69-475
drogoethite, *Russian SFSR,* formation
onditions, 69-3502
drogrossular, deuterated, neutron and
X-ray diffraction, 69-2102 ; from pump-
llyite, 69-1213 ; *Poland,* chromian,
nal., sp.gr., origin, 69-2263
drohematite, *India,* in gossan, 69-2968
drolysis, of U with *T* increase, 69-440
dromagnesite, *Italy,* in serpentine, d.t.a.,
X-ray, 69-2360 ; *New York,* in serpentine,
9-2686
dromica, authigenic, anal., X-ray, d.t.a.,
g.a., 69-2293 ; *Russian SFSR,* mus-
ovitic, 69-2865 ; *Ukrainian SSR,* mus-
ovitic, 69-2865
drosodalite, neutron diffraction anal.,
tructure, 69-158
drotalcite, structure, 69-1061
drothermal activity, *Cornwall,* 69-2666 ;
Italy, in crystallization of rhyodacites,
9-3379
— alteration, implications of irreversibility, 69-3071 ; in intrusive rocks, loss of Pb and Zn, 69-375 ; *Alaska,* phases, 69-1699 ; *Colorado,* 69-2568 ; *Kuriles,* Fe, Al and Ti during, 69-3107 ; *mid-Atlantic ridge,* of basalt and peridotite, 69-864 ; *Nevada,* of rocks, 69-1359 ; *Soviet Far East,* of volcanic rocks, 69-2566
— deposits, *Japan,* zoned structure, 69-1018 ; *USSR,* mineral parageneses, 69-1921
— mineralization, age-determination, 69-25
— ores, origin, 69-2934
— systems, hot-water/rock interaction, 69-1202
Hydroxyapatite, dielectric properties, 69-849, 850 ; IR, 69-845 ; stability, 69-295 ; structural origin of physical property differences, 69-184 ; synthetic, structure and relation to Sn (II) apatite, 69-1198 ; *France,* lenses in quartzite, X-ray, 69-2561
Hydroxylapatite *v.* hydroxyapatite
Hydroxyl-topaz, IR, H atom coordinates, 69-1043
Hydrozincite, crystallog., X-ray, sp.gr., 69-1523 ; natural and synthetic, 69-1522 ; stacking-order, 69-1074
Hypersthene, B indicator in Mg skarns, 69-3084 ; thermodynamic criteria for equilibrium in, 69-3072 ; *Malagasy Republic,* 69-1772 ; *New Zealand,* in volcanic rocks, tr. element anal., 69-3083 ; *Siberia,* paragenesis with sillimanite, anal., opt., 69-2273 ; *Spain,* 'hypersthene isograd' in metamorphic rocks, 69-2584, in gneisses, mineral parageneses with, 69-2583 ; *Sudbury,* Fs_{13-33}, anal., 69-210
Hypocuprosis, *England,* and Mo in stream sediments, 69-3162

Ice, density, 69-1737 ; method of growing tubular crystals, 69-275
ICELAND, basalt, 69-1755; basalt, n.r.m., 69-860 ; basaltic sheets, 69-1620 ; epidote in hot spring systems, 69-2212 ; geomagnetic polarity zones in lavas, 69-2658 ; subaquatic volcanoes, 69-1653 ; Tertiary geomagnetic field, 69-2656 ; volcanism correlated with Norwegian ash, 69-1807 ; xenoliths in lavas, 69-1652 ; *Hveragerdi,* geothermal drill holes, 69-2211 ; *Reykjavik,* geothermal drill holes, 69-2211 ; *Stretishorn,* complex dyke, 69-2500 ; *Surtsey,* acid xenoliths, 69-1652, deuterium in volcanic gas, 69-759, radon in volcanic gas, 69-760, volcanic gases, 69-758, 759, 760, water in volcanic gas, 69-760 ; *Syrtlingur, Surtsey,* smoke clouds, 69-1650
IDAHO, argillite, chert, 69-3509 ; comp. of batholith, 69-2474 ; metals in black shales, 69-2175 ; shale, 69-3509 ; *Albion range,* gneiss domes, metamorphism, 69-2606 ; *Alder creek, Custer Co.,* Cu and Pb-Zn ores, 69-2483 ; *Big creek quadrangle,* syenite, 69-2470 ; between *Big creek* and *Yellow Pine,* cinnabar in stibnite, 69-2676 ; *Owyhee Co.,* madocite, 69-1534 ; *Riggins quadrangle,* trondhjemite, 69-2471 ; *St. Joe river,* staurolite zone, 69-2607 ; *Snow Peak–Mallard Park region,* batholith contact aureole, 69-780 ; *Valley Co.,* rhabdophane, 69-3343
Idocrase *v.* vesuvianite
Igdloite *v.* lueshite
Iglesiente, Sardinia v. Italy
Igneous activity, *India,* metamorphism during, 69-3583 ; *Moldavian SSR,* Archaean to Mesozoic, 69-3395 ; *USSR,* 69-3566
— complex, *Ben Nevis,* crystallization of magmas, anal., tr. elements, 69-638 ; *India,* origin, rock-types, 69-3418
— rocks, abundance of N, 69-344 ; and salination of natural water, 69-2208 ; average Au in, 69-3102 ; charnockitic, classification of, 69-2400 ; classification of magmatites, 69-2401 ; computer programme for calculation of chem. anal. from modal anal., 69-1842 ; comp. of biotite in, 69-1631 ; cooling and solidification of, 69-630 ; determination of V, Cr and Fe, 69-371 ; distribution of Be in, 69-2157 ; diversity from sediments, 69-1630 ; formation of anhydrite in, 69-2082 ; frequency distribution of element concentration in ferromag. phases, 69-3074 ; genesis of calc-alkaline suite, 69-1218 ; geochemical ranking, 69-2150 ; intermediate, anal. for K, U and Th, 69-388 ; magnetic stability from coercivity spectra, 69-3610 ; n.r.m., 69-860 ; Ni/Co and mafic index in series, 69-374 ; photometric determination of V in, 69-1854 ; quartz-rich classification of, 69-2399 ; *RE* in, 69-3070 ; same ages have similar compositions, 69-1087 ; V/Co/Ni ratio, 69-370 ; zoning of series, 69-1550 ; *Aldan,* age, 69-21 ; *Argyllshire,* basic, anal., 69-2564 ; *California,* Ta in, 69-2163 ; *Colorado,* geology, 69-720, 721, laccolithic cluster, structure, anal., 69-2476 ; *Hungary,* Sr in, 69-3105, Sr isotope ratios, 69-1291 ; *Japan,* Sc in, 69-2160, U anal. by spectrophotofluorimetry, 69-1892 ; *Lake District,* 69-2415 ; *Nevada,* 69-2816 ; *New Zealand,* petrochemistry, anal., 69-706, petrology, 69-704 ; *Oregon,* Pb ages, 69-2717 ; *Perthshire,* geological guide, 69-1896 ; *Queensland,* age, Sr isotopes, 69-2719 ; *Rajasthan,* complex, anal., 69-693 ; *southern Africa,* origin of associated acid and basic, Rb/Sr measurements, 69-2155 ; *Tasmania,* n.r.m., 69-2664 ; *USA,* Mn in coexisting biotite and hornblende, 69-1294 ; *Washington,* Pb ages, 69-2717
Ignimbrite, origin, 69-3354 ; *Chile,* pumice in, anal., 69-1615 ; *Ethiopia,* genesis, 69-3473 ; *Italy,* F in, 69-2230 ; *Malagasy Republic,* petrography, 69-1592 ; *Nevada,* flows, plugs and dykes, 69-2406 ; *New Zealand,* tr. elements in, origin, 69-745 ; *Nicaragua,* origin of fiamme in, anal., 69-756 ; *Spain,* syngenetic with Au ore, 69-258 ; *Vietnam,* in ignimbritic conglomerate, anal., 69-3423
Ignimbritic facies, *Sardinia,* of dyke rock, petrography, 69-3378
— rocks, *Trentino,* anal., 69-3387
Ijolite-urtite, *Russian SFSR,* origin of magma, chem. anal., 69-682
Ilimaussaq v. Greenland
Ilimaussite, *Greenland,* new mineral, anal., formula, reflectivity, X-ray, 69-3352
ILLINOIS, clay mineral zonation of loess, 69-1000 ; clays, 69-996 ; heavy minerals, 69-2550 ; S in coal, 69-1341 ; underclays, petrography and uses, 69-999 ; Zn in magnetite, 69-1481 ; *Hardin Co.,* fluorite, 69-2034 ; *Pope Co.,* fluorite, 69-2034 ; *Waltersburg,* crude oils, 69-1366
Illite, charge balance between ions, 69-2301 ; composition and structure, anal., 69-1910 ; crystallinity as measure of

Illite, *(contd.)*
incipient metamorphism, 69-2830; crystal order, schistosity and load metamorphism, 69-803 ; indicator of diagenesis–metamorphism border zone, 69-803 ; recrystallization and *T*, 69-803 ; F^- absorption capacity, 69-92; release of Fe, K and Ca, 69-1210 ; *Belgium,* non-marine glauconitic, anal., X-ray, 69-2864 ; *England,* in Chalk, 69-109, in fuller's earth, 69-1677 ; *Europe,* in Chalk, 69-109 ; *France,* in Jurassic sediments, 69-406 ; *Hawaii,* in marine environment, 69-1008 ; *Tennessee,* sorption of Cs isotope, 69-398
Il'men' mts. v. USSR
Ilmenite, anal. of reaction rims, 69-2334 ; cause of magnetism in volcanic rocks, 69-1754 ; in charnockite, anal., 69-1701 ; photometric determination of V in, 69-1854 ; rare inclusions in diamonds, 69-3061 ; refr. ind., dispersion curve, absorption coefficient, 69-558 ; *Austria,* in schist, 69-2591 ; *Brazil,* 69-1114 ; *California,* manganoan, in adamellite, anal., 69-3316, Ta in, 69-2163 ; *Egypt,* in sands, exsolution and alteration, electron probe, 69-3314 ; *France,* with crichtonite, 69-3315 ; *Germany,* in metamorphic aureole, 69-3526 ; *Illinois,* in sands, 69-2550 ; *New York,* magnetite ratio in deposit, 69-718 ; *New Zealand,* in gneiss, opt., physical data, 69-824 ; *Russian SFSR,* porphyroblasts in schists, 69-1346 ; *South Africa,* occurrence and reserves, 69-2940 ; *Ukrainian SSR,* accessory radioactive elements in, 69-1266
—, –hematite system, super-exchange mechanisms, 69-1065
Ilmenorutile, *Mozambique,* anal., X-ray, sp.gr., 69-1480
Ilmtal-Suhl v. Germany
Ilvaite, *Ukrainian SFSR,* 69-1766
Ilva valley, Carpathians v. Romania
Imhofite, structure, 69-167
Imogolite, anal., structure, 69-2908 ; a unique aluminosilicate, electron diffraction, IR, structure, 69-2834
Impactites, IR of water in, 69-3198 ; origin, 69-495
Inagla, Siberia, v. Russian SFSR
Inclusions, biotite and quartz in feldspar, origin, 69-1565 ; biotite and rutile, in quartz, 69-2448 ; in basalts, depth indicators, 69-1626 ; in fluorite, 69-2381 ; in minerals, geochemistry, petrography, 69-1369 ; in quartz, 69-3296, 3359 ; in pegmatite, pH and comp., 69-632 ; in scapolite, affect on tr. element determination, 69-2318 ; in vein quartz, anal. of solids, method, 69-1370 ; form eddies in rhyolite; 69-2505 ; mineral, in gemstones, anal., 69-3062 ; syngenetic, in diamonds, X-ray, 69-3061 ; synthetic in quartz, 69-2099 ; textures in garnets, 69-3206 ; zoned in quartz, 69-3531 ; *Alaska,* in lava, 69-1651, tectonic, in serpentinites, 69-2569 ; *Colombia,* in emeralds, 69-3064 ; *France,* klockmannite in chalcopyrite, 69-2979, 3 phase in quartz, 69-3168 ; *Haute-Loire,* in olivines and diopsides in ultrabasic nodules, 69-647 ; *India,* in garnets in schist, 69-3582 ; *Italy,* in tuffs, chem., X-ray, d.t.a., 69-1578 ; *Kola peninsula,* in apatite, 69-3169 ; *Nigeria,* in trachyte, 69-3456 ; *Puy-de-Dôme,* in olivines and diopsides in ultrabasic nodules, 69-647 ; *Ukrainian SSR,* in smoky quartz, mineralogy, 69-1299
—, fluid, comp. of minerogenetic solutions, 69-2099 ; determination of Ca, Mg and Na in, 69-973 ; determination of CO_2 in, 69-946 ; extraction and anal., 69-974 ; for geochemical exploration, 69-1385 ; freezing and heating stage for study, 69-974 ; freezing data, 69-974 ; in hypogene mineralization, 29-2405 ; in peridotitic nodules, 69-1368 ; in quartz, 69-1367, 2448, 3296 ; *Canada,* in apatite, 69-2213 ; *Colombia,* in emeralds, 69-3064 ; *France,* CH_4 in quartz, 69-2214 ; in sphalerite, 69-2965 ; *Kazakh SSR,* in zoned quartz and fluorite crystal, anal., 69-2170 ; *Morocco,* in fluorite, 69-2215 ; *Quebec,* in calcite ovoids in lamprophyre, 69-3429 ; *Siberia,* in wolframite and quartz, anal., 69-1135 ; *Tasmania,* in quartz and fluorite, 69-2955 ; *Ukrainian SSR,* in quartz, 69-1298 ; *Urals,* and metamorphic grade, 69-3170
India, apatite-bearing magnetite ores, 69-2028 ; diamond, 69-1240 ; economic minerals, book, 69-1899 ; fireclay, 69-1914 ; Mn protores, 69-231 ; moisture adsorption capacities of soils, 69-2849 ; Sylhet traps, 69-3420 ; titanomaghemite, 69-1483 ; U-bearing ores, 69-45 ; W deposits, 69-2987 ; *Adilabad, A.P.,* leucosyenites, 69-3421 ; *Aligarh,* clays, 69-1001 ; *Almora, Kumaon Himalaya,* zircons, 69-3419 ; *Amjhor, Bihar,* octahedral pyrite, 69-3321 ; *Anantagiri, Eastern Ghats, A.P.,* charnockites, 69-3581 ; *Angul, Orissa,* metamorphosed norite and gabbro, metasediments, 69-822 ; *Asnawi, Gujarat,* ankaramite, 69-3235 ; *Bababudans, Mysore,* amosite, 69-3247 ; *Barmer, Rajasthan,* bentonite, 69-110 ; *Batchia, Tripura,* sandstone correlation, 69-3504 ; *Bheraghat, Jabalpur,* talc in dolomites, 69-3536 ; *Bihar,* Fe–Ti minerals, 69-3308, U ores, 69-3086 ; *Bokaro, Bihar,* clastic dykes, 69-3505 ; *Calcutta,* ground-waters, 69-3157 ; *Chail, Simla hills,* chloritoid, 69-3622 ; *Chakrabandha, Gaya, Bihar,* Sn, 60-2954 ; *Chandragiri, A. P.,* dyke rocks, 69-3624 ; *Channapatna, Bangalore, Mysore,* andradite, 69-3209, cordierite, 69-3226 ; *Chimakurti, A.P.,* synetic charnockites, 69-1598 ; *Chor, H.P.,* regional metamorphism of pelitic rocks, 69-3576 ; *Cuddapah basin,* gravity study, 69-2696 ; *Dalima,* granodiorite, 69-3442 ; *Darjeeling,* coal, 69-781 ; *Darjeeling Himalayas,* inclusions in garnets, 69-3582 ; *Dehu, Poona,* apophyllite, 69-3621 ; *Demu, Palamau, Bihar,* hornblendite, 69-3415 ; *Devi, Dhura, Almora, U.P.,* albite rims in granitic rocks, 69-3535 ; *Dhauladhar range, Dharmsala,* rapakivi structure, 69-3467 ; *Dublabera,* greenschist metamorphism of gabbro, 69-3543 ; *Eastern Ghats,* ultramafic rocks, 69-3101 ; *Garo hills, Assam,* sedimentation, 69-3503 ; *Girechina, U.P.,* magnesite and talc, 69-3332 ; *Goa,* Fe ores, 69-1123 ; *Godavari delta,* Mn in sediments, 69-3119 ; *Goldongri, Panchmahal, Gujrat,* grossular-spessartine garnet, 69-503 ; *Gujarat,* U ores, 69-3086 ; *Hassan, Mysore,* actinolite, 69-3250 ; *Himalaya,* coal, 69-781, Tertiary sedimentation, 69-776 ; *Hingoria, Broach, Gujarat,* fluorite deposit, carbonatite (?), 69-2995 ; *Hyderabad,* granites, 69-3465 ; *Jaipur, Rajasthan,* dumortierite, 69-3623 ; *Jharia coalfield, Dhanbad, Bi* coal, 69-781 ; *Jobalpur,* sediments, 3506 ; *Jubbal, H.P.,* anthophyllite sc 69-3625 ; *Jungalgali, Jammu, Kash* bauxite, 69-1931 ; *Kajlidongri,* ard nite, 69-2266 ; *Kalrangi, Orissa,* k mererite and uvarovite in chromite body, 69-541 ; *Kandyal Gaon, U* talc, 69-795 ; *Khalra hills, Mahen garh, Haryana,* pegmatites, 69-34 *Kinarsani, A.P.,* Precambrian struct and tectonics, 69-3585 ; *Kisheng* nepheline rocks, 69-3464 ; *Koduru,* fra linite, 69-3309 ; *Kondapalli, A.P.,* a thosite, 69-3575, charnockitic ro 69-3237, 3248, 3575, 3577, coexis pyroxenes, 69-3236, paired pyroxe 69-3233, scapolite, 69-3298 ; *Ko gudium coalfield, Godavari valley, A* coal, 69-781 ; *Kotharia, Udai Rajasthan,* structural and metamor geology, 69-3584 ; *Latehar, Palam Bihar,* igneous activity, metamorphi 69-3583 ; *Madiga Inom mine, Nell A.P.,* biotite, 69-3266 ; *Madras,* c nockite, 69-691, 2400, 3237, grou water, 69-3122 ; *Maharashtra, Do Buzurg,* manganese ore, 69-579 ; *M bhum,* charnockites, norites, ultrab rocks, 69-3469 ; *Mosabani mine, Bi* U geochemistry, 69-3085 ; *Mosab Surda, Singhbhum, Bihar,* Cu sulph apatite-magnetite deposits, 69-2972 ; *Girnar, Saurashtra,* amphibole, 69-3 femaghastingsite, 69-3255 ; *Mundw Sirohi, Rajasthan,* layered complex, 3452 ; *Muri-Silli-Jhalida,* pegmati 69-3586; *Mysore,* Archaean stratigra 69-3417, pillow lavas, 69-3579 ; *Narn Patiala,* orbicular structure, 69-34 *Nausahi-Nilgiri,* igneous complex 3418 ; *Nellore, A.P.,* microcline perthi 69-2311, muscovite in pegmatite, 2286 ; *Nuggihalli, Mysore,* garnie nickel-antigorite, 69-3274, greensc 69-3573 ; *Orissa,* Fe–Ti mine 69-3308 ; *Panhasa, Jammu, Kash* bauxite, 69-1931 ; *Paravati hills, Po* apophyllite, 69-2303 ; *Pench Kan valley, M.P.,* basalt, dolerite, 69-6 *Pokhri-Tunji, Chamoli, Garhwal,* mineralisation, 69-2981 ; *Punjab,* ments, heavy minerals, 69-776 ; *Pur Bihar,* pegmatites, 69-3586 ; *Rajast* granodiorites, 69-3468, mackina 69-3626, pegmatites, 69-3414, U 69-3086, valleriite, 69-3626 ; *Rajg Ajmer, Rajasthan,* emeralds, 69-30 *Rajhara colliery, Daltonganj coalf* coal, 69-781 ; *Rajpura, Rajasthan,* cronite and boulangerite, 69-570 ; *Ra mines, Singhbhum, Bihar,* sulphide 69-3087 ; *Ramagundam coalfield, Goda valley, A.P.,* coal, 69-781 ; *Ramkr napur coalfield, Godavari valley, A* 69-781 ; *Ranchi, Bihar,* pegmatites, 3586 ; *Roam-Rakha, Singhbhum, Bi* gossans, 69-2968 ; *Sainj-Tirthan vall H.P.,* gneiss fabrics, 69-3441 ; *S Jammu, Kashmir,* bauxite, 69-1931; *S Boblili, A.P.,* coexisting pyroxe 69-3234; *Simla,* metamorphism, 69-35 *Singhbhum, Bihar,* Precambrian chr logy, 69-2725, tetradymite and wehr 69-3328, xenolithic granophyre dy 69-3466 ; *Sirohi, Rajasthan,* igne complex, 69-693 ; *Sivamalai,* pyrox exsolution lamellae, 69-516 ; *Srikakul A.P.,* Mn granulites, khondalites, 69-8

IA, *(contd.)*
innevelly, Madras, charnockitic rocks, 9-3470 ; *Tirupati,* composite dyke, 9-3446 ; *Ulindakonda, Kurnool, A.P.,* uffsites' in pebble dyke, 69-3580 ; *Umra, ajasthan,* soil geochemistry, 69-3121 ; *mrer coalfield, Maharashtra,* coal, 69-81 ; *U.P.,* Mn in soils, 69-3120, sedi-ents, 69-776 ; *Visakhapatnam, A.P.,* iopside and scapolite gneisses, 69-3578 ; *awar,* trace elements in sulphides, 9-2024
DIAN OCEAN, Mn nodules, 69-1319 ; tr. netals in sediments, 69-2174 ; *Carlsberg idge,* pillow lavas, 69-2451, serpentinite, 9-3397, spilites, 69-2451, tholeiitic asalt, 69-3397 ; *Cocos Is.,* alkali basalts, rachyte, 69-2452 ; *Gulf of Aden,* evolu-ion of, 69-1787, 1790 ; *Bras de la Plaine, Reunion Is.,* volcanism, 69-2450
dium, bacterial leaching from sulphide ores, 69-2141 ; in Fe meteorites, 69-2236 ; *New Brunswick,* in coexisting minerals from Sn deposit, 69-2146 ; *Romania,* in ore, 69-1261 ; *Siberia,* in cassiterite, 69-1112
compounds, phosphide, absolute polarity, 69-132 ; synthetic silicate and hydrogarnet, 69-2104
do-Arabian ridge = Carlsberg ridge
dochinites, origin of shape, relationship to australites, 69-497
DONESIA, *Telaga Bodas crater lake,* S isotopes, 69-410
esite, *New South Wales,* in veins, anal., opt., X-ray, d.t.a., t.g.a., IR, 69-3242
ferno, 10^9 °K, proposed term, 69-886
frared spectra, anhydrous sulphates, 69-1969 ; of apatite, 69-845 ; of dahllite, 69-844 ; of francolite, 69-851 ; of humic acid, modifications, 69-1330 ; of hydroxy-apatite, 69-845 ; of synthetic dahllite, 69-851 ; of water adsorbed by mont-morillonite, 69-2845
spectrometry, determination of opal in deep-sea sediments, 69-977 ; in clay mineral studies, 69-1902 ; of anhydrous sulphates, 69-1969 ; polarizing prism, 69-1824 ; studies of heat-treated amphi-bole asbestos, 69-522 ; water in granites, 69-1890
gleton, Yorkshire v. England
organic matter, *Amazon River,* 69-432
sch, Aberdeenshire v. Scotland
subric Line v. Italy
trusions, heats of cooling and crystalliz-ation, 69-1744
trusive complex, *Italy,* in dolomite, age, origin, 69-3389
rocks, loss of Pb and Zn in hydrothermal alteration, 69-375 ; *Antarctica,* magnet-ism, 69-2661, 2662 ; *France,* age, 69-1803 ; *Germany,* age, 69-1804 ; *Italy,* anal., 69-3382 ; *Nevada,* range in comp. due to assimilation, 69-3204 ; *Puerto Rico,* anal., 69-3436 ; *Siberia,* Fe oxidation, 69-683
verness-shire v. Scotland
yo Co. v. California
yo mts. v. California
yoite, stability field, 69-2094
dine, determination by XRF, 69-2802
n exchange, anion, in illites, 69-92 ;
capacity related to mineral comp. and grain size, 69-1905 ; cation, in hydro-biotite, 69-91 ; cation in NH_4-mont-morillonite, 69-90 ; substoichimetric separation of Sc in meteorites, 69-71
ne v. California
Ionic radii, calculated for multivalent cations from lattice constants, 69-1026
Ionium-uranium ratio, for age determination, 69-384
IOWA, *Dubuque,* phosphorite, 69-1148
Iowaite, structure, X-ray, 69-1965
Ippaiyama mine, Honshu v. Japan
IRAN, crown jewels, book, 69-986 ; *Great Kavir,* salt weathering, 69-1687 ; *Khu-chiré,* labradorite, 69-1473 ; *Tehran,* ground-water, 69-1355 ; *Zarehchouran mine, Afshar,* getchellite, 69-1502
IRELAND, base metal distribution and continental drift, 69-233 ; *Abbeytown,* base metal ore, 69-233 ; *Gortdrum,* base metal ore, 69-233 ; *Riofinex,* base metal ore, 69-233 ; *west coast,* biogenic car-bonate in beach sediments, 69-771
—, ANTRIM, *Carneal,* spinel in larnite-spinel rock, 69-577 ; *Scawt hill ,* ettringite, 69-180
—, DONEGAL, *Donegal Bay,* dolerite dyke, 69-643
—, DOWN, *Ards Peninsula,* stevensite, 69-867
—, FERMANAGH, anhydrite, 69-1761, doler-ite dyke, 69-642
—, GALWAY, *Connemara,* granite, 69-1621, quartz-plagioclase gneiss, 69-1709 ; *Tynagh,* base metal ore, 69-233, 234
—, LOUTH, *Carlingford,* granophyre ring-dyke, 69-750
—, TIPPERARY, *Silvermines,* base metal ore, 69-233, 2005
—, TYRONE, anhydrite, 69-1761
Iridium, determination in rocks by neutron activation, 69-72 ; in iron meteorites, 69-3189 ; in rocks, ores and meteorites by neutron activation, 69-2803 ; *Atlantic, Indian* and *Pacific Oceans,* in Mn nodules, 69-1319
Irish creek v. Virginia
Irisu, Talasskiy Alatau v. Kirgizian SSR
Iron, effect on electrophoretic mobility of humic acid, 69-1330 ; anal. by portable radioisotope XRF analyser, 69-962 ; assay, 69-60 ; determination, 69-50, 57 ; de-termination in cement by atomic absorp-tion, 69-1876 ; differentiation in upper mantle, 69-1251 ; distribution between garnet and coexisting minerals, 69-1348 ; distribution coefficient between olivine and pyroxene, 69-1220 ; distribution in carbonaceous schists, 69-1345 ; distri-bution in coexisting olivine and pyroxene, 69-3081 ; ε-Fe in meteorites, X-ray, 69-1524 ; Fe^{2+} determination in refractory silicates, 69-2773 ; Fe^{3+} and cell para-meter *b* in clinopyroxene, 69-3229 ; ferric, cause of colour in charnockites, 69-3362 ; ferrous determination, effect of metallic Fe from grinding, 69-926 ; films and exchange capacity of minerals, 69-2181 ; fraction-ation in Solar System, 69-341, 2135 ; hydrothermal entry into sphalerite, 69-3015 ; in amphiboles, 69-3257 ; in coexisting garnet and clinopyroxene, 69-2261 ; in coexisting pyroxenes and garnet, 69-2154 ; in crocidolite, cation distribution, 69-143 ; in diaspore, effect on IR absorption bands and lattice distance, 69-587 ; in igneous rocks, 69-371 ; in ilmenite, 69-2334 ; in ludwigite–vonsenite series, microindentation hard-ness, 69-3605 ; in sediment, determines degree of oxidation, 69-3136 ; in system Fe–S–O, 69-3017 ; isothermal compression of alloys, 69-2625 ; opt. absorption spectra in chlorite, biotite, phlogopite, vivianite, 69-1952 ; potentiometric determination in rocks, 69-2776 ; rapid determination by atomic absorption, 69-1874 ; relation with Ti and V in pyroxenites, 69-369 ; separa-tion of Te from, 69-1871 ; *Black Sea,* in Fe-Mn concretions, 69-3134; *Brazil,* resources, 69-2946 ; *Buenos Aires,* ore reserves calculated, 69-202 ; *Cornwall,* distribution in granites, 69-359, ferrous, in biotite, weathering, 69-2295 ; *Devon,* distribution in granites, 69-359 ; *Indian Ocean,* in sediments, 69-2174 ; *Italy,* degree of oxidation in metamorphic rocks, 69-1347, in granite, 69-3098 ; *Kuriles,* removed in hydrothermal alteration, 69-3107 ; *Mexi-co,* in apatite, 69-2370 ; *New Zealand,* in plagioclases, 69-3083, in waters, 69-442 ; *Norway,* in thortveitite, 69-3221 ; *Pacific Ocean,* in water from cores, 69-1320 ; *Russian SFSR,* in lake water, 69-2204 ; *Siberia,* isomorphism with Mg in ferro-mag. minerals 69-423 ; *South Australia,* in laterites, 69-2964 ; *Turkey,* in bauxite, anal., X-ray, t.g.a., 69-774 ; *Ukrainian SSR,* in biotites and host rocks, 69-1460 ; *Urals,* associated with magmatism, 69-3392 ; *USA,* in black shales, 69-2175 ; *Western Australia,* development of re-sources, 69-196 ; *Wyoming,* distribution in U deposits, 69-1269
— compounds, α-hydroxide, superpara-magnetism of, 69-1751 ; disulphides, diarsenides, sulpharsenides, structural stability, 69-1957 ; Fe^{2+}, Fe^{3+} deter-mination by XRF, 69-2796 ; FeAs, Fe_2As, free energy, enthalpy, entropy, 69-3016 ; FeO, heating device for deter-minations, 69-1862 ; FeO in lower mantle, 69-2408 ; ferrous silicates, 'buffer-tech-nique' for synthesis, 69-2106 ; hydroxide electronoptical information, 69-1732 ; Mössbauer spectra of Fe_7S_8, 69-1038 ; $NaFeGe_2O_6$, structure, X-ray, 69-1974 ; oxide dendrites produced by bacteria, 69-3076 ; oxide, electronoptical infor-mation, 69-1732 ; *Germany,* oxide in talc, anal., 69-2299 ; *India,* hydroxide, 69-2968 ; *Tennessee,* sorption of Co isotope by hydrous oxide, 69-398 ; *Ukrainian SSR,* disulphides from coal, comp, 69-1340
— formation, O isotopes between minerals, 69-3088 ; *Labrador,* anal., mineralogy, petrology, 69-2279 ; *Quebec,* metamor-phism, mineralogy, 69-2280 ; *Russian SFSR,* tectonics and metamorphism, 69-3567 ; *Sweden,* metamorphosed, miner-alogy, anal., 69-1702
— -Mn concretions, *Black Sea,* anal., origin, 69-3134
— minerals, cause of absorption bands in silicates, 69-1033 ; *India,* Fe–Ti min-erals, 69-3308
— ore, formation of metasomatic deposits, 69-1210 ; hematite/magnetite relation-ship in, 69-2029 ; Kiruna type, 69-2029 ; oolitic, origin, 69-1122 ; tr. elements of lake, bog and rock, compared with artefacts, 69-2182 ; *Austria,* 69-1124 ; *Brazil,* 69-2027, resources, itabirite as source, 69-228 ; *Chile,* apatite-bearing, internal features, 69-2028 , radioactivity associated with deposits, 69-198 ; *Czechoslovakia,* genesis, 69-252, origin, 69-250, V in ,69-1268 ; *England,* ironstone opencast mining, 69-1673 ; *Finland,* late magmatic, anal., 69-1996 ; *France,* oolitic, 69-1122 ; *Germany,* 69-2970, oolitic, anal.,

Iron, *(contd.)*
structure, 69-1336 ; *Goa,* mineralogy anal., d.t.a., 69-1123 ; *India,* apatite-bearing, internal features, 69-2028 ; *Mediterranean Sea,* formation in fumarole field, comp., 69-2183 ; *Missouri,* opt., geology, origin, 69-1612 ; *North America,* apatite-bearing, internal features, 69-2028, banded, comparison of basins, 69-1095, formation, 69-3533 ; *Poland,* mineralogy, structure, texture, 69-574 ; *Romania,* metallogenic map of deposits, 69-1088 ; *Russian SFSR,* hematite, blastomylonite ore, 69-2032, oolitic, origin, 69-3502, realgar in, 69-1765 ; *Siberia,* equilibrium thermodynamics, 69-285, origin of deposits, 69-2966 ; *South Africa,* banded, comparison of basins, 69-1095, formation, 69-3533, occurrence and reserves, 69-2940 ; *Sudbury,* origin, 69-210 ; *Sweden,* 69-2030, apatite-bearing, internal features, 69-2028, geochemistry, anal., 69-1702, sedimentary, post depositional sulphide mineralization, 69-2033 ; *Tasmania,* magnetite, 69-2031 ; *Turkey,* review of industry, 69-2967 ; *Urals,* aeromagnetic prospecting, 69-2026 ; *Western Australia,* banded, comparison of basins, anal., 69-1095
— -Al-Mn ore, formation, book, 69-2822
Ironsand, *New Zealand,* pseudobrookite in, 69-283, 284, source, rutile in, 69-284
Isère v. France
Island arcs, spatial relations of basaltic magmas in, 69-630
Isle of Skye, Inverness-shire v. Scotland
Isomorphism, in aluminous pyroxenes, 69-1221 ; of B in silicates, 69-3084 ; series between manjiroite and cryptomelane, 69-2387 ; 3D diagram for amphiboles, 69-519 ; *Siberia,* in riebeckite, 69-3260 ; *Ukrainian SSR,* in biotite, 69-1459 ; *USSR,* of Rb in sylvine and carnallite, 69-414
Isorthoclase, *Romania,* anal., opt., 69-1471
Isotopes, chromatography, 69-48 ; dilution of Lu, 69-966 ; in volcanic rocks, geochemistry of, 69-630 ; precision of spectrographic anal., 69-76 ; ratio variations interpretation, 69-1273 ; Pb, anal., 69-78 ; *Colorado,* variation in ore leads, 69-1274
Israel, clays, 69-2872 ; *Jerusalem,* comp. of dew and dry fallout, 69-444 ; *Nari,* lime-crust, 69-2513
Istanbul v. Turkey
Itabirite, *Brazil,* as source and host of hematite ore, 69-227, as source of Fe ore, 69-228
Italian Alps v. Italy
Italy, age of rocks, minerals, 69-12 ; age of volcanic rocks, 69-384 ; bituminous shales, 69-409 ; carbonate rocks, 69-3116 ; garnets, 69-1413 ; hydrogarnets, 69-1413 ; K-feldspars, 69-3281 ; tectonics and volcanism of Apennine orogeny, 69-2441 ; ultramafic rocks, 69-665, 668, 669 ; *Adamello,* cummingtonite, 69-2284 ; *Adamello massif,* garnet-bearing aplites, 69-2262 ; *Alban hills,* Rb and K in volcanic rocks, 69-1293 ; *Albarea, Val Chisone,* granodioritization, 69-2503 ; *Alpe dei Masi, Alto Adige,* chloritoid in phyllite, 69-2264 ; *Alpe Rosso, Novara,* roggianite, 69-3345 ; *Alpi Cozie,* schists and gneisses, 69-2587 ; *Alps,* garnets, 69-1412, granofels, 69-807, granogneiss, 69-807, metamorphic rocks, 69-805. 807. muscovite and phengite in metamorphic rocks, 69-533, regional metamorphism, 69-804, ultrabasic rocks, 69-810 ; *alta Valtellina,* prasinites and amphibolites, 69-1343 ; *Ambin massif, Cottian Alps,* geology, 69-1579, metamorphic rocks, 69-1711 ; *Anzola, Ivrea zone,* bytownite, 69-3290 ; *Aosta,* ophiolites of the Versoyen zone, 69-2433 ; *Apennines,* radiometric ages, 1957-1962, 69-1802 ; *Ariccia,* leucite, 69-1053 ; *Aversa,* volcanic rocks, 69-1575 ; *Balangero, Torino,* sulphides in asbestos, 69-2974 ; *Baldissero massif,* 69-810 ; *Baveno,* age of grantie, 69-12, 1809, bavenite, 69-1764, zircon morphology, 69-1809 ; *Berbenno, Sondrio,* epidote, 69-3218 ; *Biellese,* plagioclase twinning, 69-2316 ; *Bolzano,* inclusions in quartz, 69-3359 ; *Bressanone,* gabbro, 69-1573 ; *Brosso, Ivrea,* szájbelyite–sussexite series, 69-3337 ; *Calabria,* regional metamorphism, 69-3561 ; *Canavese,* heavy minerals in granites, 69-2257 ; *Canzoccoli,* vesuvianite, 69-3214 ; *Capri,* volcanism, 69-2439 ; *Caserta,* volcanic rocks, 69-1575 ; *Cetine di Cotorniano, Rosia, Siena,* onoratoite, 69-614 ; *Cima d'Asta, Trentino,* granite, granodiorite, tonalite, 69-3385, schlieren, 69-3386 ; *Cimino volcano,* Rb and K geochemistry, 69-1293 ; *Civitavecchia, Lazio,* volcanic rocks, 69-1577 ; *Colli Albani,* haüyne melteigite, 69-3388 ; *Comelico, Cadore,* phyllites, porphyroids, 69-2440 ; *Corio, Alpi Occidentali,* amphibolites, 69-2589 ; *Dolomites,* 'sédimentation déclive', 69-2510 ; *Domodossola,* bavenite, 69-1764 ; *Dora Maira,* metamorphism, 69-801 ; *Doss Capello, Predazzo,* eruptive rocks, 69-3383 ; *Erselli, Riviera di Ponente,* inclusions in pillows, 69-3108 ; *Ferriere, Piacenza,* clay minerals, 69-993 ; *Finero, Valle Cannobina,* ultrabasic rocks, geological itinerary, 69-1762 ; *Fuardo, Lipari Is.,* alteration crust on andesite, 69-1690, celadonite–tridymite–cristobalite paragenesis, 69-1690 ; *Gambellara, Vicenza,* tridymite and quartz in basalt, 69-1576 ; *Gorno, Bergamo Alps,* Pb-Zn ores, 69-2978; *Grand Paradis, Alpes Graies,* age of gneiss, 69-800, metamorphism, 69-801 ; *Grosseto, Tuscany,* albite crossitite, 69-2436 ; *Insubric Line,* 69-809 ; *Ivrea zone,* Earth's crust/mantle transition, 69-1742, high density at 10-30 km., 69-2695, plagioclase twinning, 69-3289, seismic study, 69-2698 ; *Laghi, Alto Vicentino,* metamorphic rocks, 69-2562 ; *Lagonegro, Potenza,* mixed-layer clay minerals, 69-1907 ; *Lake Maggiore,* granites, 69-2257 ; *Lanzo massif,* 69-810 ; *Libiola,* native Ag, 69-3301 ; *Ligurian Apennines,* ophiolites, 69-2434 ; *Lipari Is.,* altered volcanic rocks, 69-1678, volcanite, 69-3518 ; *Livinallongo,* feldspars of the 'pietra verde', 69-3277 ; *Locana massif,* 69-810 ; *Malenco,* serpentinite, 69-1408 ; *Mattie, Susa valley,* Cr phengite in marble, 69-2290 ; *Miagliano, Biella,* age of monzonitic rocks, 69-11 ; *Modugno, Bari,* limestones, 69-1679 ; *Monastero, Alpi Occidentali,* amphibolites, 69-2589 ; *Monte Amiata, Tuscany,* sanidine and biotite, 69-2291 ; *Monte Biaena, Trento,* gyrolite, 69-1426, tobermorite, 69-1426 ; *Monte Cimino, Tuscany,* sanidine and biotite, 69-2291 ; *Monte Ehie Horn, Novara,* pegmatite, 69-667; *Monte Massico, Caserta,* tuffs, 69-1578; *Monte Orfano, Lake Maggiore,* age of grani zircon morphology, 69-1809 ; *Mo Rosso, Grosseto,* volcanic rocks, 69-157 *Monte Vulture, Lucania,* geology, p rology of lavas, 69-2437, volca products, volcanic events, 69-243 *Monte Zeda, Lake Maggiore,* gra gneiss, 69-811 ; *Monzoni,* intrusive co plex, 69-3389, potassic volcanic roc 69-3460 ; *Monzoni mts.,* intrusive roc 69-3382, xenoliths in monzodiorite, 3525 ; *Mount Zaccon, Valsugana,* rh dacites, 69-3379 ; *Mt. Mulat, Predaz* monzonite, syenite, 69-3384 ; *Nap* potassic volcanic rocks, 69-3460 ; *Nova* garnet, 69-1411 ; *Orciatico, Pisa,* da sonite, 69-2667 ; *Ornavasso, Nova* cummingtonite, 69-1984 ; *Passo d Rossola, Adamello,* orthoclase, 69-147 *Passo del Rombo, Alto Adige,* almandi 69-3211 ; *Phlegraean fields,* B and F volcanic products, 69-3109 ; *Pianu Phlegraean fields,* raphisiderite, 69-148 *Picco d'Ivigna, Alto Adige,* sillimar gneiss, 69-2585 ; *Piémont,* ophiolites, 810 ; *Po valley,* comp. of interstit water in clays, 69-2873 ; *Predazzo,* of igneous rocks, 69-2726, gran 69-3096, 3098, 3381, intrusive compl predazzite, 69-3389 ; *Predosa* interbedc clay and bentonite, 69-2866 ; *Pug* recent sediments, 69-3498, terra ros 69-2522 ; *Punta Jolanda, Gresson Piemonte,* hydromagnesite, 69-236 *Quadrate, Trentino,* sphalerite stars, 3324 ; *Rimella, Val Mastallone,* granu facies, 69-805 ; *Rio Masul, Alto Ad* sillimanite gneiss, 69-2585 ; *Rivara mas* 69-810 ; *Roccastrada, Tuscany,* sanid and biotite, 69-2291 ; *Rome,* leucite, 1053 ; *Sabatini, Latium,* volcano, 3461 ; *S. Anastasia, Monte Somma,* sa 69-2523 ; *S. Marino on Fiora, Gross* dawsonite, 69-2667 ; *S. Martino Monteneve, Alto Adige,* Pb-Zn ores, 2016 ; *San Vicenzo, Tuscany,* sanid and biotite, 69-2291 ; *Scena, Alto Ad* sillimanite gneiss, 69-2585 ; *Scort* Mn minerals, 69-1127 ; *Sesia-Lar Piemonte,* clinopyroxene, omphacite, 1436 ; *Somma-Vesuvius,* carbonate se ments and ejecta, 69-1647 ; *Strona val Novara,* metamorphism, 69-1714, erals in manganiferous rocks, 69-144 *Taureana, Reggio Calabria,* gneisses metamorphosed carbonate rocks, 1710 ; *Tavagnasco, Val d'Ao* omphacite, 69-3240 ; *Tel, Alto Ad* porphyrites, telliti, 69-2442 ; *Terran da Sibari, Calabria,* lawsonite-glau phane schists, 69-3560 ; *Tolfa, Lati* alunite and clay minerals, 69-28 volcanic rocks, 69-1577 ; *Toppo S. Pa Vulture,* melanite, 69-3210 ; *Traverse Torino,* prospecting, 69-2938, radioact minerals in skarns, 69-2938, scheel 69-2960 ; *Trentino,* ignimbrites, 69-22 ignimbritic and pyroclastic rocks, 3387 ; *Trivero, Val Sessera,* granu facies, 69-805 ; *Tuscany,* Hg survey, 1383 ; *Val Chisone, Massiccio D Maira,* augen-gneiss formation, 69-258 *Val d'Agno,* clay minerals from ba weathering, 69-2874 ; *Val d'Aosta, Co* magnetite ore in serpentinite, 69-2 *Val d'Ossola,* age of minerals, 69- geological itinerary, 69-1762, phyl belt, 69-808 ; *Val Gardonè, Predaz* volcanic rocks, 69-3380 ; *Valle Anza*

LY, (contd.)
Novara, garnets, 69-3207 ; *Valle del Chiampo,* clay minerals from basalt weathering, 69-2874 ; *Valle del Visone,* crystalline schists, 69-2588 ; *Valle di Vizze, Alto Adige,* geology, petrography, 69-2443 ; *Valle Grosina, Sondrio,* metamorphic rocks, 69-2586 ; *Valle Onsernone,* molybdenite, 69-1763 ; *Valle Strona, Novara,* Fe oxidation in metamorphic rocks, 69-1347, geological itinerary, 69-1762, K/Rb in metamorphic sequence, 69-3142, ultramafic rocks, 69-2435 ; *Val Scalotta, Predazzo,* volcanic rocks, 69-3380 ; *Valsesia, Vercelli,* andesine-corundum veinlets, 69-806 ; *Val Sessera, Vercelli,* apatite, 69-3339, anatase, 69-2557 ; *Varallo, Vercelli,* basic complex, 69-666 ; *Vesuvius,* double sulphates, 69-2932, davyne, 69-617, leucite, 69-1053, leucite, thermal transition, 69-2051, microsommite, 69-617, Tl compounds, 69-2932 ; *Vico, Latium,* volcano, 69-3461, volcano, Rb and K geochemistry, 69-1293 ; *Vignola, Valsugana,* fluorite, sphalerite, galena, 69-2015 ; *Vigonzano,* Cu deposit, 69-2013 ; *Vulcano Is., Lipari Is.,* tritium in fumaroles, 69-1363 ; *Vulsini, Latium,* volcano, 69-3461 ; *Zaccon, Valsugana,* baryte and fluorite, 69-2014 ; *Zovencedo, Vicenza,* diagenesis of sediments, 69-3520
ELBA, age of granite, 69-905; hematite, magnetite, 69-835 ; *Rio Marina,* beraunite, 69-1516
SARDINIA, Pb and Zn mineralization, 69-1099; *Bono-Bitti-Torpè,* granitic and metamorphic rocks, 69-1641 ; *Busachi,* tourmalinite veins, 69-2429 ; *Dorgali,* pillow lavas, 69-2432 ; *Iglesiente,* sphalerite, 69-1503 ; *Logudoro,* basalts, 69-3376 ; *Maddalena,* biotites in granites, 69-1456, 1457 ; *Monte Tundoni,* melanocratic dyke rock, 69-3378 ; *Montevecchio,* Pb-Zn ore, 69-2017 ; *Monti-Berchidda,* crystalline rocks, 69-2430 ; *Montiferru,* phonolite, trachyphonolite, 69-1691 ; *Orosei,* pillow lavas, 69-2432 ; *Poggio Ferrante, Caprera Is.,* muscovite, 69-3262; *Sa Lilla,* sulphide ores, dykes, skarns, 69-1125 ; *S. Pietro Is.,* comenditic rocks, 69-3377 ; *San Stefano Is., Maddalena archipelago,* dyke rocks, granite, 69-1640 ; *Sarroch, Cagliari,* lavas, 69-2428 ; *Scoglio di Seulo, Gadoni,* tonalite dyke, 69-2431 ; *Su Fruscu,* ore deposit, alteration minerals, 69-1129
SICILY, comp. of interstitial water in clays, 69-2873 ; ferri-ilmenite in lava, 69-763 ; magnetic opaques in lava, 69-763 ; phosphate deposits, 69-274 ; titanomagnetite in lava, 69-763 ; *Adrano,* tholeiitic basalts, 69-2426 ; *Etna,* double sulphates, 69-2932, ferromagnetism of 1928 lava, titanomagnetites, 69-575, properties of 1966 magma, 69-2504, Tl compounds, 69-2932 ; *Mascali, Etna,* lava, melting temperatures, 69-1219 ; *Motta Sant' Anastasia,* tholeiitic basalts, 69-2426 ; *Palagonia,* hyaloclastites, 69-3375 ; *Peloritani mts.,* magnetite, 69-2054 ; *Pirgo, Novara di Sicilia,* kaolin, 69-1924 ; *Ragusa,* phosphate deposits, 69-274 ; *San Cataldo, Caltanissetta,* Miocene evaporites, 69-3115 ; *Santa Maria di Licodia,* tholeiitic basalts, 69-2426 ; *Val di Noto,* lavas, 69-2427
sy v. Malagasy Republic
igawa-shi, Honshu v. Japan
Ivdel, Urals v. Russian SFSR
Iveland v. Norway
IVORY COAST, granite alteration, biotite, kaolinite, 69-2877 ; leaching of rocks, 69-1329 ; *Aboisso,* halloysite, 69-2863 ; *Man,* age of basement rocks, 69-2710 ; *Tiassale,* river water, 69-1353
Ivrea v. Italy
Ivrea zone v. Italy
Iwate, Honshu v. Japan
Ixiolite, *USSR,* in pegmatite, disordered wodginite, 69-1485

Jabalpur v. India
Jáchymov v. Czechoslovakia
Jackson Purchase v. Kentucky
Jacobsite, similar to synthetic spinel ferrite, 69-831 ; *Brazil,* in manganese mines, cell size, 69-576
Jade, terminology, 69-1247
Jadeite, stability in silicate melt, experimental data, 69-309 ; thermochemistry, 69-310 ; *Arizona,* in eclogite inclusions, anal., 69-3590 ; *Russian SFSR,* in amygdales in meta-extrusives, 69-1721
—–quartz, stability and metamorphic pressures, 69-306
Jahn-Teller effect, 69-1034
Jaipur, Rajasthan v. India
Jalpaite, *Colorado,* anal., X-ray, sp.gr., 69-1491
Jamesonite, diagnostic features, 69-3330 ; *Massif Central,* 69-2959 ; *Portugal,* in borehole, 69-2971
Jamestown, Boulder Co. v. Colorado
Jammu, Kashmir v. India
Janes mine, Cornwall v. England
Janggun mine, Taebaeg mts. v. Korea
JAPAN, carbonaceous matter in metamorphic rocks, 69-2597 ; colour in zircons, 69-2463 ; dosulite, 69-1096 ; hydrothermal deposits, 69-1018 ; kaolin deposits, 69-1018 ; Mn minerals, Mn ores, book, 69-1096 ; osumilite structure, 69-2893 ; peridotites, 69-2464 ; Sc in igneous rocks, 69-2160 ; sublake basalt, 69-1659 ; U in igneous rocks by spectrophotofluorimetry, 69-1892 ; ultrabasic rocks, 69-2464 ; wollastonite and para—, 69-1047; yamatoite, 69-1096 ; *Higasi-akaisi, Gongen valley,* eclogites, 69-3426 ; *Mount Hakone,* volcano development, 69-1655 ; *Ooiso hills,* pyroclastic deposits, 69-1655 ; *Ryukyu (Nansei) Is.,* heavy minerals, 69-778 ; *San'in,* clinoptilolite, 69-2128 ; *Ugusu,* kaolin deposits, 69-1018
—, HONSHU, stilbite, 69-2325 ; *Kosaka mine, Akita,* Cu, Zn, Pb ores, 69-245 ; *Azuma mine, Fukushima,* quartz, 69-3294 ; *Chichibu mine, Saitama,* xanthophyllite, 69-1454 ; *Fuji,* evolution of volcano, ^{14}C dating, 69-764 ; *Hida,* augen structure, 69-3282 ; *Hirose, Tottori,* aquacreptite, 69-149 ; *Hosokura mine, Miyagi,* sphalerite, 69-2093 ; *Hudakake, Kiyokawa-mura, Kanagawa,* scolecite, 69-2325 ; *Ippaiyama mine,* quartz, 69-3294 ; *Kamioka mine, Gifu,* hedenbergite and epidote in skarn, 69-2277 ; *Kamogawa, Chiba,* metamorphic rocks, 69-2282; *Katsuyama, Okayama,* garnet, 69-2259 ; *Kofu,* stone carvers, 69-1250 ; *Kohara mine,* manjirōite, 69-2387 ; *Maizuru, Kyoto,* olivines in peridotites, 69-2253 ; *Matsusaka, Mie,* biotite, 69-2294 ; *Miyamori, Iwate,* aquacreptite, 69-149 ; *Mount Fuji,* volcano development, 69-1655 ; *Naegi, Gifu,* quartz, 69-2639 ; *Onikobe, Miyagi,* volcanic rocks, yugawaralite, 69-2327 ; *Oshima, Otsukishi, Yamanashi,* mesolite, 69-2325 ; *Tezuka, Nishisioda-mura, Nagano,* mesolite, 69-2325 ; *Tono, Kitakami mts.,* almandine-bearing hornfelses, 69-2563 ; *Waniguchi, Itoigawa-shi, Niigata,* mesolite, 69-2325
—, KYUSHU, heavy minerals, 69-778 ; *Kashii, Fukuoka,* lizardite, 69-2298
—, SHIKOKU, *Tosa,* bementite-greenalite series, tosalite, 69-1096
Japan, Sea of v. Asia
Jarosite, *Alaska,* by hydrothermal alteration, 69-1699 ; *Spain,* in bentonite, anal., X-ray, origin, 69-598
Jasper, *Western Australia,* localities, 69-1245
Jasperoid, anal. for Au, 69-3090 ; criteria for recognition, comp., 69-1136 ; *Saudi Arabia,* anomalous metal concentrations, anal., 69-1137
Jebel Gurgei v. Sudan
Jebel Irhoud v. Morocco
Jefferson Co. v. Colorado
Jeffersonite, *New Jersey,* 69-2679
Jeffrey mine, Quebec v. Canada
Jeremeievite *v.* eremeyevite
Jerusalem v. Israel
Jeseník mts. v. Czechoslovakia
Jet, *Yorkshire,* trace elements in, 69-3112
Jharia coalfield, Bihar v. India
Jimberlana, Western Australia v. Australia
Jobalpur v. India
Joesmithite, *Sweden,* in skarn, crystallography, anal., X-ray, 69-2391
Johachidolite, revised chem. formula, 69-2365
Johnstonotite, *Tasmania,* not valid species, anal., 69-616
Johore v. Malaya
Joints, density in sedimentary rocks, measure of stress, 69-2512
Jordanite, comp. and stability, 69-3020 ; structure, 69-167 ; substitution of Sb for As in, 69-3020 ; *Lengenbach,* 69-2352 ; *Spain,* 69-2348
Jordanów, Silesia v. Poland
Jordisite, *New Mexico,* 69-1777
Josëite, *New South Wales,* 69-225 ; *Uzbek SSR,* in quartz-bismuthinite, formula, anal., X-ray, sp.gr., 69-569
Jos plateau v. Nigeria
Jouravskite, 69-621
Juab Co. v. Utah
Juan Fernandez Is. v. Pacific Ocean
Jubbal, Himachal Pradesh v. India
Jujuy v. Argentina
'Jumilitic' rock type, 69-1569
Jumilla, Murcia v. Spain
Jungalgali, Kashmir v. India
Jurkowice, Klimontow v. Poland
Jussarö v. Finland

Kaavi v. Finland
Kaersutite, paragenesis and occurrence, 69-523 ; *Arizona,* from basalt, opt., sp.gr., anal., X-ray, 69-523, xenocrysts in peridotite, paragenesis, 69-3432 ; *Pyrénées,* TiO_2 in, 69-648 ; *Tahiti,* anal., opt., 69-2406 ; *Tristan da Cunha,* in xenoliths, anal., opt., 69-2447 ; *Western Australia,* in metagabbro, anal., 69-3587
Kafan v. Armenian SSR
Kainite, *Sicily,* 69-3115
Kainji dam v. Nigeria
Kaiser Gebirge v. Austria
Kaiserstuhl v. Germany
Kajlidongri v. India
Kakamas, Cape Province v. South Africa
Kakanui, South Is. v. New Zealand

Kakortokite, *Greenland,* anal., 69-635
Kalar, Siberia v. Russian SFSR
Kalbin range v. USSR
Kalgan v. China
Kalgoorlie, Western Australia v. Australia
Kaliborite, structure, 69-1967
Kalistrontite, *Germany,* in Stassfurt layer, chem., crystallog., 69-3335
Kaloum peninsula v. Guinea
Kalrangi, Orissa v. India
Kalsilite, electrical conductivity, 69-855, 2652 ; *Siberia,* in pseudoleucite in nepheline syenites, origin in pegmatite, anal., X-ray, sp.gr., 69-550, in pseudoleucite rocks, 69-3400
Kamacite, in meteorites, lattice parameters by Kossel technique, 69-3177 ; in meteorites, X-ray, shock effects in, 69-479
Kamchatka, Soviet Far East v. Russian SFSR
Kamioka mine, Honshu v. Japan
Kämmererite, *Orissa,* in chromite ore body, anal., opt., 69-541
Kamogawa, Honshu v. Japan
Kanagawa, Honshu v. Japan
Kandite group minerals *v.* Clay minerals
Kandyal Gaon, Uttar Pradesh v. India
Kane Springs canyon v. Utah
Kane Springs Wash, Lincoln Co. v. Nevada
Kanem v. Chad
Kanimansur v. USSR
Kansas, basaluminite and hydrobasaluminite, 69-596 ; kaolinite, 69-1923 ; *Doniphan Co.,* glacial deposits, clay minerals, 69-1942 ; *Wilson Co.,* dickite, 69-1923 ; *Woodson Co.,* dickite, 69-1923
Kao v. Lesotho
Kaolin, effects of Fe films on exchange capacity, 69-2181 ; genesis of deposits, 69-1015, 1016, 1017, 1018, 1019, 1021 ; world production and trade survey, 69-1021 ; *Bohemia,* anal., X-ray, 69-2857, d.t.a., grain size anal., 69-2858 ; *Czechoslovakia,* major element distribution in deposits, anal., 69-1017, petrographical types in granite massif, 69-2859 ; *Denmark,* geochemistry of deposit, 69-408, major element distribution in deposits, anal., 69-1017 ; *Georgia,* comp., origin, properties of deposits, 69-102 ; *Ghana,* petrography, d.t.a., t.g.a., X-ray, EM, 69-1015 ; *Hampshire Basin,* origin, 69-112 ; *Japan,* energy of formation, zonal structure of deposits, 69-1018 ; *Shetland Is.,* occurrence and origin of deposit, anal., 69-103 ; *Sicily,* origin, chem., X-ray, d.t.a., 69-1924 ; *South Carolina,* comp., origin and properties of deposit, 69-102
Kaolinite, adsorption of $H_2PO_4^-$ ions, 69-2839 ; anal. by small angle X-ray scattering, 69-81 ; differentiation from chlorite, 69-2828 ; dimethyldioctadecyl ammonium derivatives, 69-2831 ; exchangeable cations, influence on thermal reactions, X-ray, d.t.a., 69-318 ; from albite, 69-3050 ; illitization, 69-2873 ; O–H stretching vibrations, IR, X-ray, 69-2844 ; reaction with $Ca(OH)_2$, 69-1917 ; reaction with Na_2CO_3, 69-316 ; reactive hot pressing, 69-2852 ; rheology of suspensions, 69-2824 ; structure, 69-2901 ; studies in *USSR,* 69-1921 ; *T* and intensity of OH vibration bands, 69-2885 ; *California,* anal., 69-2860 ; *Cornwall,* X-ray, anal., d.t.a., 69-1016 ; *Devon,* IR, relationships and origins, 69-2824 ; *Dnieper-Donets basin,* 69-1014 ; *Donets basin,* 69-1014 ; *England,* in Chalk, 69-109, in fuller's earth, 69-1677 ; *Europe,* in Chalk, 69-109 ; *France,* in bauxite, d.t.a., t.g.a., X-ray, IR, 69-2516 ; *French Guiana,* in laterites, 69-1933 ; *Ivory Coast,* formation directly from biotite, IR, X-ray, 69-2877 ; *Japan,* from altered biotite, anal., X-ray, sp.gr., 69-2294 ; *Kansas,* in limestone and sandstone, 69-1923 ; *Pakistan,* anal., d.t.a., X-ray, 69-101 ; *USSR,* permeability of ceramic, 69-994 ; *Wyoming,* with alunite, 69-2539 ; *Yugoslavia,* from alteration of ultramafic rocks, anal., 69-1019
— -muscovite-quartz mixture, changes on firing, pore size distribution, 69-98
Kaolinization, *S.W. England,* 69-3095
Kap Edvard Holm v. Greenland
Kara-Bogaz v. Turkmen SSR
Karadag, Crimea v. Ukrainian SSR
Kara-Kum (Karakum) v. Turkmenian SSR
Karamazar v. Tadzhik SSR
Karamazars v. USSR
Karelia v. Finland ; Russian SFSR
Karkonosze v. Poland
Karlovy Vary v. Czechoslovakia
Karst, *France,* 69-3517, fissure infillings, 69-2521
Karymskaya, Soviet Far East v. Russian SFSR
Kashii, Kyushu v. Japan
Kasolite, identification by γ-ray spectrum, 69-854
Katanga v. Congo
Katanga, Siberia v. Russian SFSR
Katsuyama, Honshu v. Japan
Kawthulay v. Burma
Kazakh SSR, Au and Ag in sulphide ores, 69-264 ; bazzite, 69-3222 ; deuterium in waters, 69-430 ; hypabyssal granite, 69-736 ; Pb isotopes in waters, 69-431 ; pyrosmaltite, 69-1987 ; quartz, 69-3293 ; Re and Mo in sulphides, 69-405 ; V-As germanite, 69-613 ; *Akzhaylyaus,* mineralizing solutions, 69-632 ; *Ala-Kool, Lake Balkash,* balkaschite, 69-2187 ; *Atasuĭ,* friedelite and ferroan friedelite, 69-556 ; *Bet-Pak-Dala,* evaporites, 69-2531, pegmatite fluid inclusions, 69-2170 ; *Chu-Sarysu depression,* evaporites, 69-2531 ; *Dzhail'ma trough,* clay minerals in cherty limestone, 69-1940 ; *Dzhezkazgan,* rhodusite, 69-1445 ; *Lake Balkash,* Pb isotopes, 69-431 ; *Sargardon,* chrysoberyl, 69-580 ; *Tarbagatai,* zeolites, 69-2321 ; *Tarbagatay range,* geology, 69-1587 ; *Ugam river basin,* pink calcite, 69-853
Kazanskaya v. Russian SFSR
Keatite, 69-1465
Kef Talrempt v. Algeria
Keimoes, Cape Province v. South Africa
Keku Strait v. Alaska
Kemi v. Finland
Kenhardt, Cape Province v. South Africa
Kennecott copper mines, Wrangell mts. v. Alaska
Kennedy's vale, Lydenburg, Transvaal v. South Africa
Kent massif v. USSR
Kentallen, Argyllshire v. Scotland
Kent Co. v. Rhode Island
Kentucky, flint clay, 69-2544 ; sphalerite, 69-2339 ; *Jackson Purchase,* clay, 69-2867
Kenya, *Lake Magadi,* chert, 69-1695 ; *Magadi,* magadiite-chert transition, 69-3533 ; *Sultan Hamud, Machakos,* riebeckite, 69-526
Kenyaite, alteration to chert, 69-1695 ; *California,* monoclinic, X-ray, 69-2306 ; *Kenya,* 69-1695 ; *Tanzania,* 69-1695
Keratophyre, *France,* anal., 69-2419
Kerch peninsula v. Russian SFSR
Kermac Sec. 10 mine, McKinley Co. New Mexico
Kern Co. v. California
Kernite, stability field, 69-2094 ; structu 69-2921
Kersantite, mica crystallization in, 6 3263 ; *England,* dyke, mineralogy, 6 639 ; *France,* comp., 69-2420, origi 69-2417 ; *Hungary,* geochemistry, 6 1281 ; *Lake District,* 69-2415
Keuper Marl, structure and clay mine content, 69-997
Keweenaw v. Michigan
Khalra hills, Haryana v. India
Kharlovo, Siberia v. Russian SFSR
Khibina, Kola peninsula v. Russian SFS
Khibiny, Kola peninsula v. Russian SFS
Khingan, Siberia v. Russian SFSR
Khondalite, *India,* garnetiferous and granulite in, 69-823, –leptynite group metasediments, 69-822
Khovu-Aksu v. USSR
Kibi v. Ghana
Kilauea, Hawaii v. Pacific Ocean
Kilauea Iki, Hawaii v. Pacific Ocean
Kila-Warji v. Nigeria
Kilonwa v. Tanzania
Kimberley v. South Africa
Kimberlite, *Arizona,* eclogite inclusio in pipes, 69-3590 ; *Czechoslovakia,* bearing minerals in xenoliths, 69-37 *France,* peridotite xenoliths in, ans 69-3524 ; *Siberia,* age, 69-1817, surfac of minerals in, 69-685 ; *Siberian platfor* as origin of bauxite, anal., 69-19 zoned residuum, 69-1935 ; *South Afri* Cr-bearing minerals in xenoliths, 69-37 *Yakutia,* Cr-bearing minerals in xen liths, 69-372
Kinarsani river, Andhra Pradesh v. India
Kincardineshire v. Scotland
King Is., Tasmania v. Australia
King's mt. v. North Carolina
Kingston, Ontario v. Canada
Kintyre, Argyllshire v. Scotland
Kirchberg v. Germany
Kirgizian SSR, *Irisu, Talasskiy Alat* pseudoleucite, 69-3455
Kirkland Lake, Ontario v. Canada
Kirumba, Kivu v. Congo
Kirunavaara v. Sweden
Kisbánya v. Romania
Kishengarh v. India
Kitakami mts., Honshu v. Japan
Kitel, Ladoga v. USSR
Kivu v. Congo
Kiyokawa, Honshu v. Japan
Kizil Dagh, Hatay v. Turkey
Kjelsåsite, *Norway,* Rb-Sr isotopic studi 69-2727
Klamath v. California
Klamath mts. v. California
Kleiner Johannes mine, Oberfranken Germany
Kletna, Sudeten v. Poland
Klickitat river v. Washington
Klimontow v. Poland
Klockmannite, *France,* inclusions in ch copyrite, 69-2979
Kloech, Styria v. Austria
Knob Lake, Quebec v. Canada
Knorringite, replaces discredited hanléi 69-2390 ; *Lesotho,* in kimberlite, ans 69-2390
Kobellite, *North America,* anal., X-r 69-2386 ; *Sweden,* anal., X-ray, 69-238

durite, term discussed, 69-231
duru v. India
enenite, structure, 69-1061 ; *Hanover,* tructure, 69-164
fu, Honshu v. Japan
hara mine, Honshu v. Japan
jice v. Czechoslovakia
la v. Russian SFSR
la peninsula v. Russian SFSR
lba, Slovakia v. Czechoslovakia
ndapalli, Andhra Pradesh v. India
ngsberg v. Norway
nigshain v. Germany
minckite, *Belgium,* on richellite, crystallog., X-ray, 69-1515
nkudero-Mamakansk complex, Baikal, Siberia v. Russian SFSR
nsko-Yalynskaya depression, Azov v. Ukrainian SFSR
otenay Lake, British Columbia v. Canada
OREA, *Janggun mine, Taebaeg mts.,* Mn ore in limestone, 69-1126 ; *Okbang mine, Gyeongsang,* geology, fluorite, scheelite, 69-1109 ; *Yongyang basin,* native copper, 69-3302
rgeredaba, Siberia v. Russian SFSR
rosten v. Ukrainian SSR
rsnäs v. Finland
saka mine v. Japan
oštál hill, České Středohoří v. Czechoslovakia
othagudium coalfield, Godavari valley, Andhra Pradesh v. India
otharia, Udaipur, Rajasthan v. India
otuy, Siberia v. Russian SFSR
ovdor v. Russian SFSR
oyukuk river v. Alaska
ragerø v. Norway
rásná Hora, Bohemia v. Czechoslovakia
rasnodon v. Ukrainian SSR
rasnovodsk v. Turkmen SSR
rasnoyarskiy kray v. Russian SFSR
rasnoye lake v. Russian SFSR
rennerite, *Colorado,* 69-2957 ; *Uzbek SSR,* in Cu-Bi ores, 69-263
—gold, *Western Australia,* assemblage disproved, 69-261
rinovite, in meteorites, new mineral, anal., X-ray, 69-3351
ristineberg, Skellefte v. Sweden
rivoy Rog v. Ukrainian SSR
rkonoše mts. v. Czechoslovakia
rynka river v. Russian SFSR
rypton, migration in pitchblende and uraninite, 69-1372
—isotopes, in stone meteorites, 69-485
uanshan, Taitung v. Taiwan
ublang, Bleiberg v. Austria
uchiré v. Iran
ugi-Lyal, Pamir v. Tadzhik SSR
ukisvumchorr, Kola peninsula v. Russian SFSR
ukulbeisk, Siberia v. Russian SFSR
ukulbey, Transbaikalia v. Russian SFSR
umaon Himalaya, Andhra Pradesh v. India
unashir Is., Soviet Far East v. Russian SFSR
unnunurra, Western Australia v. Australia
upletskite, comparison with niobophyllite, 69-1540
urama mts., Soviet Central Asia v. USSR
ureyka, Siberia v. Russian SFSR
ureyka river, Siberia v. Russian SFSR
urile Is., Soviet Far East v. Russian SFSR
uriles, Soviet Far East v. Russian SFSR
urnool, Andhra Pradesh v. India
ursk v. Russian SFSR
urzem peninsula v. Latvian SSR
Kutnahorite, *Labrador,* in Fe formation, anal., 69-2279
Kuybyshev, Transvolga v. Russian SFSR
Kuznetsk Alatau, Siberia v. Russian SFSR
Kyanite, cause of absorption bands, 69-1033 ; coupling tensors of ^{27}Al, 69-133 ; stability and metamorphic pressures, 69-306 ; *Austrian Alps,* post-deformation crystallization, 69-814 ; *Idaho, T* of crystallization, 69-2607 ; *Illinois,* in sands, 69-2550 ; *Kola peninsula,* paramorphs on andalusite, 69-1718 ; *Morocco,* in mica schist, 69-3569 ; *Ontario,* relations with gedrite, 69-3588 ; *Rhodesia,* associated with enstatite, inversion to sillimanite, 69-821 ; *Siberia,* in xenoliths, refr. ind., X-ray, 69-1586
Kyoto, Honshu v. Japan
Kyushu v. Japan
Kyzyl-Kum v. Uzbek SSR

L'Aber Benoit, Brittany v. France
Labrador, Newfoundland v. Canada
Labradorite, electrical conductivity determination, 69-855 ; *Iran,* in andesite, optical orientation, 69-1473
Laccoliths, *Colorado,* anal., comp., structure, 69-2476
La Cueva de La Bruja, Mendoza v. Argentina
Lac St.-Jean, Quebec v. Canada
Ladoga v. USSR
La Flecha gorge, San Juan v. Argentina
Laghi, Alto Vicentino v. Italy
Lagonegro, Potenza v. Italy
Lagoriolite, *Czechoslovakia,* in skarn, anal., refr., ind., sp.gr., 69-2258
Lahars, *California,* origin, 69-2406
Lake Achinos v. Greece
Lake Alaotra v. Malagasy Republic
Lake Baikal, Siberia v. Russian SFSR
Lake Balkash v. Kazakh SSR
Lake Bosumtwi Crater v. Liberia
Lake Chad = Lake Tchad
Lake Co. v. Colorado ; Oregon
Lake Constance v. Europe ; Germany
Lake District v. England
Lake George v. Colorado
Lake Kivu v. Rwanda
Lake Magadi v. Kenya
Lake Maggiore v. Italy
Lake Natron v. Tanzania
Lake Superior v. Canada
Lake Tchad v. Chad
Lake Tecopa, Inyo Co. v. California
Lake Vanda v. Antarctica
Lakeview v. Oregon
Lambert quarry, Cormeilles-en-Parisis v. France
Lamboanite, *Brazil,* derived from marly clay, 69-2614
Lamellibranchs, *Belgian basin,* O and C isotopes, 69-1338 ; *Paris basin,* O and C isotopes, 69-1338
Lamproite, mica crystallization in, 69-3263
Lamprophyre, mica crystallization in, 69-3263 ; *Antarctica,* dykes, petrology, anal., 69-711 ; *England,* dyke, 69-639 ; *France,* between granite phases, comp., 69-2420 ; genesis, 69-2417 ; *Germany,* dykes, petrography, petrochem., geochem., anal., 69-672 ; *Lake District,* dioritic, 69-2415 ; *Quebec,* contains calcite ovoids, petrography, 69-3429
Lancashire v. England
Lancaster Co. v. Pennsylvania
Lander Co. v. Nevada
Land's End, Cornwall v. England
Långban v. Sweden
Långbanite, identity of ferrostibian with, X-ray, 69-2335
Lanthanide elements, determination in rocks by neutron activation anal., 69-69 ; *Germany,* distribution in basalts compared with chondrites, 69-1304
Lanthanides, concentrated in igneous rocks, 69-3070 ; in minerals, effect of environment, 69-3070 ; in Mohole basalt, 69-1627 ; *Atlantic Ocean,* in basalts, mass spectrography, 69-3104
Lanthanum, anal. by chromatography and neutron activation, 69-70 ; determination in rocks by neutron activation, 69-69 ; in rhabdophane, 69-3343 ; *Colorado,* in lueshite, 69-2380 ; *Mexico,* in apatite, 69-2370 ; *New Zealand,* in augites, hornblendes and hypersthenes, 69-3083, in stream sediments, 69-397
— compounds, oxide as absorber in XRF anal., 69-1881
Lanzarote, Canary Is. v. Atlantic Ocean
Lanzo massif v. Italy
La Palma, Canary Is. v. Atlantic Ocean
La Pierre-qui-Vire, Yonne and Nièvre v. France
Lapilli, *North Carolina,* accretionary in slate belt, 69-2609
Lardalite, *Norway,* Rb-Sr isotopic studies, 69-2727
Largentière, Ardèche v. France
Larvikite, *Norway,* Rb-Sr isotopic studies, 69-2727
Las Animas v. Chile
Las Bela valley, West Pakistan v. Pakistan
Laser probe microanalysis, review of progress, 69-1891
Lašovice, Písek v. Czechoslovakia
Lassen Peak v. California
Latehar, Palamau, Bihar v. India
Laterite, *French Guiana,* surface to bedrock profiles, 69-1933 ; *Goa,* 69-1123 ; *Iceland,* Tertiary geomagnetic field, 69-2656 ; *South Australia,* Ni in ferruginous zones of, anal., 69-2964
Lateritization, experiments with antigorite serpentinite, 69-317
Latite, *Italy,* alteration of, 69-3383 ; *Nevada,* anal., 69-2479
Latium v. Italy
La Tranchée v. France
LATVIAN SSR, *Kurzem peninsula,* rapakivi granite, 69-3393 ; *Sigulda,* rapakivi granite, 69-3393
Laumontite, structure, 69-1991 ; *Alaska,* in sandstones, origin, 69-2320 ; *Iceland,* in geothermal drill holes, 69-2211 ; *Kazakh SSR,* in sedimentary rocks, 69-2321
Launayite, *Ontario,* new mineral, anal., X-ray, sp.gr., VHN, 69-2384
Laurion v. Greece
Laurionite, synthesis, heating curves, X-ray, 69-3030
Laurite, *Stillwater,* in ultramafic zone, 69-2349
Laurium v. Greece
Lausitz v. Germany
Lautite, structure, 69-167
Lava, alkaline salic, sub-crustal origin, 69-3456 ; Etnean, thickness, 69-755 ; solidification behaviour, 69-755 ; U and Th anal., 69-387 ; *Alaska,* inclusions in, 69-1651 ; *Antarctica,* age, 69-1799 ; *Congo,* kivitoid, anal., 69-3474 ; *Devon,* 69-1566, magnetism, age, 69-2657 ; *Eifel,* basaltic, mineralogy, chem., 69-670 ;

Lava, *(contd.)*
Etna, emission rate, 1966, 69-2504 ; melting *T*, 69-1219 ; *Faeröe Is.,* basaltic, 69-636, magnetism, age, 69-906; *France,* keratophyric, linear evolution in, chemical bipolarity, 69-650 ; *Hawaii,* anal., petrology, origin, 69-2406 ; *Iceland,* anal., of xenoliths in, 69-1652, geomagnetic polarity zones in, 69-2658, Tertiary geomagnetic field, 69-2656 ; *India,* carbonaceous material in, 69-3420 ; *Italy,* petrography, 69-2437 ; *Kilauea,* comp. during eruption, 69-1660, lake, petrology, thermometry, 69-1661, petrography, 69-1663, *T* in lake, 1963, 69-2506 ; *Kurile Is.,* globular, comp., 69-2492 ; *Nevada,* anal., norms, modes, 69-2479 ; *New South Wales,* basic, 2 trends in metamorphism, anal., 69-2598 ; *New Zealand,* palaeomagnetism, 69-861 ; *Norway,* keratophyric metamorphosed to trondhjemite, 69-1093, sulphide deposits in, 69-1093 ; *Reunion Is.,* 2 phases, 69-2450 ; *St. Helena,* age, 69-1810 ; *Sardinia,* petrochemistry, petrogenesis, 69-2428 ; *Tahiti,* anal., 69-2406
Laves-Ernst λ-phases slide, mathematical and opt. explanation, 69-922
Lawsonite, conditions of formation, 69-1211 ; stability and metamorphic *P*, 69-306 ; *Arizona,* in eclogite inclusions, 69-3590 ; *California,* metamorphic zone mineral in metagreywacke, 69-1726 ; *Oregon,* blueschist, 69-2594 ; metamorphic zone mineral in metagreywacke, 69-1726
Layered igneous rocks, 69-630 ; *Bushveld,* pyroxene trends, origin, 69-3232 ; *Finland,* chromite ore in ultrabasic intrusion, 69-1996 ; *Greenland,* intrusive mechanism, 69-3449 ; *Rajasthan,* origin, 69-3452
— texture, *Ireland,* in granite, 69-1621 ; *Siberia,* in melanephelinite sills, 69-1619
Lazio v. Latium
Leached rocks, zone below Kupferschiefer, geochemistry, 69-1337
Leaching, acid, of shale, 69-3 ; of crystalline rocks, 69-1329 ; solid state transformations during, 69-2999 ; *Mediterranean,* of forest litter, 69-2195
Lead, assay, 69-60 ; evolution of isotopes in Earth's crust, 69-345 ; extraction from rocks and minerals by electrolysis, 69-2773 ; geochemical behaviour in rocks, 69-1819 ; in G–2, 69-1378 ; in GSP–1, 69-1376 ; in leached zone below Kupferschiefer, 69-1337 ; in pyrochlore, 69-2378 ; loss in hydrothermal alteration, 69-375 ; *Alaska,* anomalous in quartz vein, 69-1262, in sediments, 69-463, suggested prospecting area, 69-197 ; *Arizona,* 69-2223 ; *Bohemia,* isotopic comp. in ores, 69-243 ; *Canada,* in pyrite, 69-1499 ; *Colorado,* in stream-water, 69-3156 ; *Cornwall,* in aureole, 69-1296 ; *Derbyshire,* brine as mineralization source, 69-1143 ; *Europe,* in Zechstein deposits, 69-415 ; *France,* in shales, 69-407 ; *Montana,* isotopic comp., 69-3165 ; *Nevada,* 69-462, 2226, anomalous concentration, 69-265; *New Mexico,* 69-2228 ; *Northern Territory,* exploration, 69-461 ; *Norway,* in nepheline and feldspar, 69-2317 ; *Pennines,* mineralization, 69-1099 ; *Romania,* distribution in volcanites, 69-1307, in ore, 69-1261 ; *Sardinia,* mineralization, 69-1099 ; *Siberia,* isotopic comp. in galena, origin of deposits, 69-352 ; *Spain,* 69-3373 ; *Tunisia,* in marls and limestones, 69-3117 ; *Urals,* in sulphide ore, isotopic comp., 69-1275; *USA,* in black shales, 69-2175; *Utah,* distribution, 69-1120
— compounds, pyrosilicate, synthesis, 69-3042
— isotopes, abundance ratios standard sample, 69-2218 ; data review, 69-915 ; in basic & ultrabasic rocks, 69-12 ; in mantle-derived volcanics, 69-2707 ; in meteorite, 69-486 ; in pegmatites, granites and ores, 69-631 ; mass spectrometric anal., 69-2773 ; spectrographic anal., 69-78 ; study of anal., 69-1378 ; theory of evolution of, 69-915 ; variations in galena, 69-915 ; *Azov Sea,* 69-431 ; *Donets Basin,* in galena, 69-460 ; *Kazakhstan,* in natural waters, 69-431 ; *Lake Balkash,* 69-431 ; *Malagasy Republic,* 69-2773 ; *Ontario,* mass spectrometric anal., 69-2773 ; *Siberia,* ratios of galena from sulphide ores, 69-2000 ; *Tadzhik SSR,* anal., of galena, 69-3092 ; *Ukraine,* in natural waters, 69-431 ; *USA,* ratios across zoned galena, 69-2143, in basalts, 69-2498, in plagioclases from contaminated basalts, 69-2498 ; *USSR,* anal., of galena, 69-3092, in natural waters, 69-431
— minerals, apatite solid solution series, discontinuities in, 69-604 ; sulphantimonides, diagnostic features, 69-3330 ; *Ontario,* sulphantimonides, new minerals, anal., X-ray, 69-2384
— mining, *Derbyshire,* book, 69-2818
— ore, Pb isotopes in, 69-631 ; *Alaska,* 69-2977 ; *France,* palaeogeographic control of mineralization, 69-2022 ; *Germany,* 69-2970 ; *Leicestershire,* 69-2665
— -Ag ore, *New South Wales,* in Consols type vein, genesis, 69-242
— -Ag-Au-Cu ore, *Western Australia,* 69-259
— -Cu-Zn ore, *Cumberland,* 69-2415 ; *Czechoslovakia,* 69-248
— -Zn ore, *Broken Hill,* quantitative chemical model, anal., 69-240 ; *France,* conditions of deposition of sulphides, 69-2965 ; *Germany,* Co- and Ni-bearing marcasite in, 69-2341 ; *Greece,* 69-238, vein deposit, 69-2975 ; *Idaho,* in skarn, 69-2483 ; *Italy,* 69-2016, 2017, two parageneses, 69-2798 ; *Norway,* 69-244 ; *Romania,* 69-3390 ; *Siberia,* 69-235 ; *Spain,* two stages of mineralization, 69-1107 ; *Tunisia,* 69-1108 ; *Vietnam,* 69-237
— -Zn-Ag ore, *Alaska,* 69-236 ; *Ireland,* anal., 69-234, in dolomite, 69-2005 ; *Northern Territory,* in tuffaceous shales, anal., 69-239
— -Zn-baryte-fluorite ore, *Pennines,* magmatic origin, 69-3163
— -Zn-Cu ore, *Japan,* with pyrite and baryte, 69-245
— -Zn-pyrite ore, *Czechoslovakia,* anal. of main minerals, 69-246
Lebombo-Nuanetsi v. Africa
Lechleitner synthetic emerald, method, properties, 69-1241
Lechtaler Alps, Tyrol v. Austria
Leeward Is. v. West Indies
Leicestershire v. England
Lengenbach, Binn valley v. Switzerland
Lengenbachite, structure, 69-167 ; *Lengenbach,* 69-2352, anal., crystallography, structure, 69-2354
Léon v. Spain
Leonite, *New Mexico,* in evaporite, ana sp.gr., opt., t.g.a., X-ray, 69-1508
Leopards hill v. Zambia
Lepidocrocite, Gibbs free energy, 69-3004
Lepidolite, structure, 69-2901 ; syntheti physical properties, 69-1223 ; 2 stages decrepitation, 69-1449 ; *France,* in pe matite, anal., refr. ind., 69-3228
Lepidomelane, *Siberia,* in pseudoleuci rocks, 69-3400
Lepontine Alps v. Switzerland
Lepontine area v. Switzerland
Le Pouget v. France
Leptite, *Sweden,* 69-2575, 2576
Leptynite, ortho- and para-, distinction geochemistry, 69-3139 ; *France,* graniti ation, 69-3551 ; *India,* –khondalite grou of metasediments, 69-822
Leśna v. Poland
Lesotho (Basutoland), *Kao,* garne knorringite, 69-2390
Lesser Caucasus v. Azerbaijan SSR
Lessingite, 69-296
Leşul Ursului v. Romania
Letovice, Moravia v. Czechoslovakia
Leuchtenbergite, hydrothermal alterati in NaOH solution, 69-2134
Leucite, electrical conductivity, 69-85 1750 ; thermal expansion data, X-ra 69-1745 ; *Congo,* thermal transitio X-ray, 69-2051 ; *Italy,* high *T*, sing crystal diffractometer study, 69-105 Rb and K in, 69-1293, thermal transitio X-ray, 69-2051
—, Rb-, electrical conductivity determ nation, 69-855
Leucitite, *Italy,* 69-2437
Leucogranite, *France,* cataclastic, ana 69-2580 ; *Massif Central,* anal., op 69-1635 ; *New South Wales,* tr. elemen in, origin, 69-745
Leucophane, *Siberia,* 69-876
Leucophosphite, *California,* in nodule 69-2541
Leucosphenite, structure, 69-2904
Leucoxene, *Illinois,* in sands, 69-2550 *Russian SFSR,* porphyroblasts in schist 69-1346
Leventina, Tessin v. Switzerland
Lewis range v. Montana
Lherzolite, *France,* anal., 69-518 ; *Hawa* experimental melting of nodule, 69-1216 *Italy,* 69-665 ; *Pyrénées,* opaque minera in, TiO_2 distribution in, 69-648 ; *Sardini* nodules in basalts, 69-3376 ; *Spain,* ana 69-1572
Liauzun-en-Olloix, Puy-de-Dôme v. Fran
Liberia, *Goe range, Grand Bassa C* metamorphic rocks, 69-2594 ; *La Bosumtwi Crater,* tektites, 69-1407
Libethenite, *Angola,* X-ray, 69-873
Libiola mine v. Italy
Libya, *Gebel el Auenat, Cufra,* rectorit 69-1909
Liebenerite, *Siberia,* replacing kalsilit 69-3400
Liebigite, synthesis, 69-2079, 2080
Lignite, Mo and W in seam, 69-2186
Ligurian Apennines v. Italy
Lime, *Israel,* geomicrobiology and ge chemistry of 'Nari-lime-crust', 69-2513 *Italy,* inclusions in pillows, origi 69-3108
Limestone, average Au in, 69-3102 deformational characteristics, 69-1741 determination of CO_2 by acid-ba titration, 69-945 ; EM, book, 69-2817

mestone, *(contd.*
EM studies, review, 69-2513 ; fine-grained, origin from coccolith muds, 69-2518 ; insoluble residues in, 69-2513 ; marine, Sr in, 69-2513; rapid determination of SiO_2 using gelatin, 69-950 ; rate of phase transition, 69-1518 ; siliceous, progressive metamorphism of, 69-2572 ; siliceous, staining for examination, 69-1833 ; *Alaska*, interlayered with basalt, Cu in, 69-2948 ; *Algeria*, lithographic, origin, 69-2517 ; *Arkansas*, oolitic, diagenesis, 69-784 ; *California*, EM, 69-2546, spheroidal weathering of, 69-1698 ; *Carpathians*, diagenetic recrystallization, 69-3513 ; *Cumberland*, solution by upward flowing water, 69-891 ; *Derbyshire*, tr. element aureoles in, 69-3163 ; *Dorset*, lithographic, origin, 69-2517 ; *Europe*, Devonian back-reef, facies types, 69-2513 ; *France*, age, 69-10, geochemistry, anal., 69-1317, intercalated with marls, EM, 69-3496, lithographic, origin, 69-2517, tr. elements in, 69-2868 ; *Germany*, bioclastic, 69-2513 ; *Italy*, 69-3560, anal., geochemistry, genesis, 69-1679, Sr in, 69-3116 ; *Kansas*, dickite and kaolinite in, 69-1923 ; *Kazakh SSR*, clay minerals in cherty, 69-1940, metamorphic, pink calcite in, 69-853 ; *Korea*, xenoliths in granite, 69-1126 ; *Morocco*, Be, Cu, Mo, W, in metamorphosed, 69-199 ; *Nottinghamshire*, galena in, 69-2023 ; *Oklahoma*, oolitic, diagenesis, 69-784 ; *Pennines*, element aureoles in, 69-3163 ; *Poland*, epigenetic, 69-2991, heavy minerals in, 69-775 ; *Pyrenees*, skarn mineralization in, 69-2010 ; *Quebec*, C and O isotopic comp., 69-2196 ; *Solenhofen*, lithographic, origin, 69-2517 ; *South Dakota*, from dolomite, 69-2540 ; *Spain*, 69-812, origin of sulphides in, 69-2001 ; *Texas*, natural thermoluminescence, 69-1746 ; *Tunisia*, Jurassic, X-ray anal., 69-3117 ; *Utah*, O and C isotope ratios of dolomitized, 69-2149 ; *West Pakistan*, reefs, dolomitized, 69-2532 ; *Wyoming*, from dolomite, 69-2540
imonite, P-bearing, Mössbauer study, 69-585 ; *France*, concretions in fissures in karst, 69-2521
imousin v. France
incoln Co. v. Nevada
ineation, tectonic significance of regional, 69-738, 739
innaeite, *South Africa*, myrmekitic intergrowth with gold and pyrrhotite, 69-1130
– group minerals, *Oslo*, 69-2973
ipari Is. v. Italy
ipscombite, zincian, anal., X-ray, 69-3338
iquidus data, machine plotting of, 69-2047
iquinaste, Jujuy v. Argentina
iroconite, structure, 69-1976 ; *Cornwall*, structure, 69-2928, 2929
irwei v. Nigeria
ithiophilite, *Argentina*, interlaminated with beusite, 69-2395 ; *Siberia*, in gneiss, anal., 69-607
ithiophorite, oriented transformation, X-ray, 69-175 ; *Guiana shield*, X-ray, 69-230
ithium, in standard rocks, 69-56 ; photoelectric determination, 69-972 ; spectrographic determination in tektites, 69-1886 ; *America*, in rivers and marine sediments, 69-1354 ; *Colorado*, tr. in granites, 69-1280 ; *Cornwall*, in granites, 69-359 ; *Devon*, distribution in granites, 69-359 ; *New Zealand*, in plagioclases, 69-3083 ; *Nigeria*, in granite, 69-380 ; *Norway*, in nepheline and feldspar, 69-2317 ; *Pyrenees*, metalliferous district, 69-3077 ; *Russian platform*, in glauconite, 69-2292 ; *Sardinia*, in biotite, 69-1457 ; *South-West Africa*, in granites, 69-1636 ; *Transbaikalia*, in granitic rocks, 69-2172 ; *Ukrainian SSR*, in salt deposits, 69-412 ; *Utah*, with Be in rhyolitic tuff, 69-2156
— compounds, $LiAlSi_2O_6$III, structure, 69-1990
Lithogenesis, book, 69-2822
Little Broken Hill, New South Wales v. Australia
Little Tarraji river, Western Australia v. Australia
Little Three mine, San Diego Co. v. California
Livengood, Yukon-Tanana upland v. Alaska
Livinallongo v. Italy
Lizard, Cornwall v. England
Lizardite, *California*, anal., X-ray, opt, sp.gr., 69-1447 ; *Japan*, in serpentinite, anal., X-ray, IR, EM, 69-2298 ; *Manitoba*, X-ray, d.t.a., opt., 69-2296
Llano Co. v. Texas
Llantrisant, Glamorganshire v. Wales
Lobietová, Slovakia v. Czechoslovakia
Locana massif v. Italy
Loch Ailsh, Sutherland v. Scotland
Loch Duich, Ross-shire v. Scotland
Lochinver, Sutherland v. Scotland
Loch Kerry, Ross-shire v. Scotland
Loess, *Illinois*, clay mineral zonation, 69-1000 ; *Poland*, heavy minerals in, 69-775 ; *Russian SFSR*, supergene alteration, tr. elements, 69-2193
Loeweite, *New Mexico*, in evaporite, anal., sp.gr., opt., t.g.a., X-ray, 69-1508
Lofoten v. Norway
Logudoro, Sardinia v. Italy
Loire v. France
Loire-Atlantique v. France
Löllingite, free energy, enthalpy, entropy, 69-3016 ; structural stability, 69-1957 ; *Czechoslovakia*, anal., 69-2385 ; *Newfoundland*, in dyke wallrock, 69-1133 ; *Virginia*, in pegmatite, 69-879
Lomagundi v. Rhodesia
London Clay, microstructures, 69-998
Longeray, Savoie v. France
Longwood range, Southland, South Is. v. New Zealand
Loparite, *Siberia*, 69-876
Lopezite, structure, 69-1972
Lorraine v. France
Los-Hamra region v. Sweden
Lotrite, *Carpathians*, original name for pumpellyite, 69-1715
Loup v. France
Louth v. Ireland
Louvie-Juzon, Basses Pyrénées v. France
Lovozero, Kola peninsula v. Russian SFSR
Lozère v. France
Lublin v. Poland
Lublinite, *Prague*, variety of calcite, EM, 69-589
Lucania v. Italy
Ludwigite, Sn content, 69-1070
— –paigeite series, Sn in, Mössbauer spectroscopy, 69-1040
— –vonsenite series, Fe and Mg in, H, 69-3605
Lueshe v. Congo
Lueshite, *Colorado*, anal., structure, 69-2380
Lugansk v. USSR
Lugo v. Spain
Lujavrite, *Greenland*, anal., 69-635
Lunedale, Yorkshire v. England
Luossavaara v. Sweden
Lutecium, anal. by isotope dilution and mass spectrometry, 69-966 ; neutron activation anal., 69-69, 966 ; *New Zealand*, in stream sediments, 69-397
Lutetium *v.* Lutecium
Luzonite, structure, 69-167 ; *Taiwan*, anal., X-ray, geochemistry, 69-1496
Lydenburg, Transvaal v. South Africa
Lydian stone, *Pyrénées*, anal., 69-2561
Lynn and Terry Counties v. Texas

Macao, *Coloane Is.*, age of granite, 69-2730 ; *Macao peninsula*, age of granite, 69-2730 ; *Taipa Is.*, age of granite, 69-2730
Macao peninsula v. Macao
McArthur, Northern Territory v. Australia
McCall seamount v. Pacific Ocean
McClure mt., Wet mts. v. Colorado
Macedonia v. Greece
Mcgovernite, structure, 69-1082
Machakos v. Kenya
Mackayite, formula and structure, 69-2917
Mackenzie river, Northwest Territories v. Canada
Mackinawite, synthesis, comp., stability relations, 69-2344 ; *Brazil*, 69-2003 ; *Bushveld*, anal., 69-2346 ; *Finland*, anal., 69-2345, 2346 ; *Rajasthan*, in Cu ore with valeriite, 69-3626 ; *Sudbury*, anal., 69-2346 ; *Transvaal*, 69-2986, anal., 69-2346
McKinley Co. v. New Mexico
McMurdo Sound v. Antarctica
Macon Co. v. North Carolina
Macquarie ridge v. Pacific Ocean
Madagascar v. Malagasy Republic
Maddalena archipelago, Sardinia v. Italy
Madelung number, of wurtzite-type structure, 69-130
Madhya Pradesh (M.P.) v. India
Madiga Inom mine, Andhra Pradesh v. India
Madoc, Ontario v. Canada
Madocite, *Idaho*, 69-1534 ; *Ontario*, in marble, mineralogy, X-ray, 69-1534
Madras v. India
Mafic index, and Ni/Co in igneous rock series, 69-374
— rocks, metamorphism, 69-630 ; *Siberia*, P in extrusive, 69-363
Magadi v. Kenya
Magadiite, alteration to chert, 69-1695 ; *California*, monoclinic, X-ray, 69-2306 ; *Kenya*, 69-1695, transition to chert, 69-3533 ; *Tanzania*, 69-1695
Magdalen Is., Quebec v. Canada
Maghemite, Gibbs free energy, 69-3004 ; magnetic studies of intergrowths with hematite, 69-1752 ; *Austria*, in schist, 69-2591 ; *Goa*, 69-1123 ; *Massachusetts*, in beach sand, 69-2543 ; *Transvaal*, 69-2986
Magma, andesite from upper mantle, 69-2168 ; breaking of, 69-3445 ; direct fusion of, 69-1649 ; for Caledonian granites, 69-3094 ; independent sources in mantle and crust, 69-3459 ; relation to environment, 69-3354 ; sialic, origin, 69-754 ; source and alteration before extrusion of volcanic, 69-3354 ; source of intermediate effusives, 69-3460 ; *Aberdeenshire*, regional gabbro, Sr isotopes during differentiation, 69-2497 ; *Bushveld*, pyroxene trends in, 69-3232 ; *Etna, T*, viscosity, 1966, 69-2504 ; *Germany*, weilburgitic, injected into tuff, 69-2444 ; *Iceland*, hybrid, geochemistry, 69-2500 ; *Italy*, differentiation, ascent, outflow,

Magma, *contd.*
69-3461 ; *Kamchatka,* generation, 69-3476 ; *Quebec,* anorthositic intruded into granulite facies, 69-1724 ; *Siberia,* alkaline, 69-1643, hybridization, 69-1644 ; *Texas,* primary and derivatives, 69-3431 ; *Turkey,* gabbroic from peridotite, 69-2495
—, alkali basalt, origin, 69-1642
—, basaltic, comp., variation with depth, 69-1626 ; differentiation, effects of H_2O and O pressures on crystallization, origin, 69-630 ; origin, 69-628 ; P as crystallization indicator, 69-3103 ; spatial relations in island arcs, 69-630 ; *Kilauea,* fractional crystallization, 69-1660 ; *Sardinia,* 69-2431
—, basic, origin of, 69-2403
—, granitic, Na mobility in, 69-3106 ; *Rhum,* origin, 69-752 ; *Sardinia,* 69-2431 ; *Skye,* origin, 69-752
—, olivine-tholeiite, from lherzolite, 69-1217
—, quartz-tholeiite, from lherzolite, 69-1217
Magmatic assimilation, *Haiti,* at marble contact, mechanisms, 69-747
— complexes, *Siberia,* comparison, fractional geochemical anal., 69-356
— differentiation, checklist of processes and variables, 69-624 ; *Colorado,* in volcanic rocks, 69-2475 ; *New Zealand,* of andesitic magma, 69-749 ; *Pennsylvania,* effect on magnetism of diabase, 69-1556
Magmatic rocks *v.* igneous rocks
Magmatism, use of terms equilibrium and disequilibrium crystallization, 69-2404 ; *Siberia,* Triassic, 69-3399 ; *Urals,* Devonian, 69-3392
Magnesioanthophyllite, natural and synthetic, props., 69-2285 ; *Pamir,* opt., unit cell, 69-2285
Magnesiocummingtonite, *New South Wales,* comp., opt., 69-3246
Magnesioferrite, similar to synthetic spinel ferrite, 69-831 ; *Siberia,* isomorphous in magnetite ores, comp., 69-3310
Magnesioriebeckite, *Franklin,* anal., X-ray, sp.gr., opt., 69-528 ; *Labrador,* in Fe formation, anal., opt., unit cell, sp.gr., 69-2279
Magnesite, crystal defects, X-ray, 69-3600 ; flotation in salts of fatty acids, 69-2072 ; heat and free energy of formation, 69-2050 ; hot pressing of, 69-280 ; metasomatic formation, 69-2071 ; solid solution with siderite, 69-3032 ; *France,* origin, 69-3530 ; *South Africa,* occurrence and reserves, 69-2940 ; *Turkey,* Recent, 69-1768 ; *Uttar Pradesh,* crystalline origin, 69-3332 ; *Washington,* geology of deposits, 69-2041
Magnesium, determination, 69-57, 1856 ; determination by atomic absorption, 69-1874, 1875, 1876 ; determination in fluid inclusions, 69-973 ; differentiation in upper mantle, 69-1251 ; fractionation in chondrites, 69-2249 ; in alkalic rocks, effect of *T* on distribution, 69-1292 ; in amphiboles, 69-3257 ; in axinite, 69-1433 ; in brines, 69-1360 ; in coexisting garnet and pyroxene, 69-2154, 2261 ; in coexisting olivine and pyroxene, 69-1220, 3081 ; in garnet and coexisting minerals, 69-1348 ; in ludwigite–vonsenite series, H., 69-3605 ; *Cornwall* and *Devon,* distribution in granites, 69-359 ; *France,* from borehole, stratigraphical profile, 69-1317 ; *France,* rate of leaching in rocks, 69-1329 ; *Germany,* in carbonates, 69-2513 ; *Italy,* in granite, 69-3098 ; *Ivory Coast,* rate of leaching in rocks, 69-1329 ; *Mediterranean,* removal from forest litter, 69-2195 ; *Mexico,* in apatite, 69-2370 ; *New Zealand,* in plagioclases, 69-3083 ; *Norway,* in calcite from sövite, 69-3361, in thortveitite, 69-3221 ; *Rajasthan,* in soils, 69-3121 ; *Siberia,* isomorphism with Fe, 69-423 ; *South-West Africa,* in granites, 69-1636 ; *Vesuvius,* in carbonate sediments and ejecta, 69-1647
— compounds, Al carbonate hydroxide tetrahydrate, structure, 69-178, 179 ; aluminate, order–disorder in, 69-1064 ; series $MgCr_2O_4$–$MgFe_2O_4$, X-ray, 69-2063
— oxide, atomic absorption spectroscopy of reactions with SiO_2, 69-3043 ; hot pressing, 69-3037 ; phase equilibria, 69-2063 ; absorption bands of Fe^{2+} in, 69-1034 ; XRF, 69-37
Magnet Cove, Hot Spring Co. v. Arkansas
Magnetic circular dichroism (MCD), review, 69-2640
— spherules, *Massachusetts,* in beach sand, 69-2543
Magnetism, direction in stressed magnetite, 69-2653 ; ferromagnetic domains, 69-1947 ; field reversal, 69-861 ; implications of superparamagnetism of α-FeOOH, 69-1751 ; in cassiterite, IR, t.g.a., 69-1479 ; magnetic structures and Shubnikov groups, 69-1948 ; magnetic symmetry of vivianite, 69-187 ; of basalt column, 69, 731 ; of oceanic cores, 69-2819 ; Ordovician pole position, 69-2701 ; remanent of hematite single-crystals, 69-3608 ; remanent of igneous rocks, 69-860 ; remanent of rocks, effect of hydrostatic pressure, 69-2655 ; self-reversal and oxidation, 69-861 ; stability in igneous rocks from coercivity spectra, 69-3610 ; thermoremanent of Ni, 69-2654 ; *Alaska,* of basalts, 69-2406 ; *Antarctica,* remanent of intrusive rocks, 69-2661 ; *Atlantic Ocean,* magnetic surveys, 69-865 ; *Cocos Is.,* of basalts and trachyte, 69-2452 ; *Devon,* of lavas and sediments, 69-2657 ; *Easter Is.,* of basalts, 69-862 ; *England,* due to pyrrhotite, 69-866 ; *Faeröe Islands,* polarity of lavas, 69-906 ; *France,* of volcanic rocks, 69-3367 ; *Hungary,* of Pliocene and Pleistocene lavas, 69-2659 ; *Iceland,* polarity zones of lavas, 69-2658, Tertiary geomagnetic field, 69-2656 ; *Juan Fernandez Is.,* 69-862 ; *Malaya,* in cassiterite, 69-1479 ; *mid-Atlantic ridge,* of basalt, greenstone and mylonite, 69-864 ; *Nevada,* susceptibility to distinguish basalts, 69-2407 ,with geochemical anomalies, 69-1386 ; *New Mexico,* of rhyolites, 69-2406 ; *Norway,* of dolerite dykes, 69-863 ; *Pennsylvania,* of diabase with magmatic differentiation, 69-1556 ; *Pyrenees,* relation to structure in metamorphic rocks, 69-837 ; *Scotland,* Tertiary geomagnetic field, 69-2656 ; *South Australia,* of Adelaide System and Cambrian, 69-2663 ; *Switzerland,* of pyroxene porphyrites, 69-3609 ; *Tasmania,* in cassiterite, 69-1479, remanent in Palaeozoic rocks, 69-2664 ; *Transvaal,* of kimberlite, 69-2660 ; *Wisconsin,* of gabbro, 69-1557
Magnetite, Fe^{2+}, Fe^{3+} determination by XRF, 69-2796 ; from breakdown of chloritoid, 69-2107 ; from dissociation of epidote, 69-1206 ; Gibbs free energy, 69-3004 ; H. and origin, 69-3311 ; basaltic and alkalic rocks, anal., 69-233 inclusions in diamonds, X-ray, 69-306 in system Fe–S–O, 69-3017 ; kenotet hedral, synthesis, 69-3009 ; low oxidation, 69-2060 ; oxidation to Fe_2O_3, model of mechanism, X-r 69-1182 ; photometric determination V in, 69-1854 ; produced on hematite reduction, 69-2061 ; relationship w hematite in Fe ore, 69-2029 ; str patterns, 69-2653 ; thermal conductiv in thin films, 69-3614 ; topotac formation from goethite, 69-170 ; *Alas* kenotetrahedral, 69-3009 ; *Austria,* p phyroblasts in schist, origin, 69-259 *Brazil,* topotactic relations of produc hematite on, 69-3599 ; *California,* Ta 69-2163 ; *Colorado,* Zn in, 69-1481 ; *El* epitaxial relationship with hemati 69-835; *Germany,* in metamorphic aureo 69-3526 ; *Illinois,* Zn in, 69-1481 ; *Ind* in gossan, 69-2968, V-bearing, anorthositic rocks, 69-3418 ; *Maryla* coexisting with rutile, apatite and chl ite, anal., 69-3313 ; *Massachusetts,* beach sand, 69-2543 ; *Montana,* Zn 69-1481 ; *New Mexico,* Zn in, 69-148 *New York,* ilmenite ratio in depos 69-718 ; *North Carolina,* in metamorp rocks with Fe-rich muscovite, 69-17 Zn in, 69-1481 ; *Norway,* geology deposits, 69-3545 ; *Oslo,* 69-2973 ; *Pola* from metamorphic rocks, structure a texture of, 69- 574 ; *Portugal,* in boreho 69-2971 ; *Siberia,* metasomatic, 69-79 *Sicily,* age, 69-2054 ; *Sudbury,* in Fe- Cu ore body, 69-210 ; *Sweden,* topotac relations of produced hematite on, 3599 ; *Transvaal,* titaniferous, an 69-2986 ; *West Indies,* plutonic, com 69-3292
— deposits, *Siberia,* patterns of distributi of Ti, V, & Mn, 69-355
— ore, *Italy,* in serpentinite, 69-22 *Siberia,* contact-metasomatic, 69-35 magnesioferrite in, comp., 69-33 *Tasmania,* 69-2031
Magnetization v. magnetism
Magneto-optical rotary dispersion (MOR review, 69-2640
Magnetoplumbite, structural relationsl with senaite and davidite, 69-173
Magnocolumbite, *Siberia,* in pegmatite, n occurrence, opt., H., sp.gr., anal., 69-
Magnolia, Boulder Co. v. Colorado
Maharashtra v. India
Mahendragarh, Haryana v. India
Maimecha-Kotui, Siberia v. Russian SFS
Maine, herderite, 69-1246 ; *Byron,* 69-1780 ; *Houghton,* Au, 69-1780 ; *Oxf Co.,* petalite, 69-1246 ; *Parmache* geology, 69-1610 ; *Rangeley-Oquoss* muscovite pseudomorphs after stauroli 69-826
Maizuru, Honshu v. Japan
Makaopuhi, Hawaii v. Pacific Ocean
Málaga v. Spain
Malachite, *Argentina,* with volborthite a carnotite, 69-885 ; *India,* 69-2968 ; *Ma land,* 69-2680 ; *New Jersey,* 69-268 *North Carolina,* on dumps, 69-2681
Malagasy Republic, Sc in pegmatit 69-368 ; *Ambararata,* phlogopite depo apatite, wernerite, sulphides, pargasi 69-2043 ; *Ambodivohitra,* ferripleonas 69-3306 ; *Ambre mt.,* ignimbrites, v canic rocks, 69-1592, phonolite, 69-244

LAGASY REPUBLIC (*contd.*)
Andriamena, sapphirine with hypersthene, 69-1772 ; *Ankasimbelo,* volcanism, 69-1593 ; *Ankisatra,* Pb isotopes, 69-2773 ; *Antampombato, Moramanga,* gabbro-syenite complex, 69-1595 ; *Beheloka,* basic complex, 69-1596 ; *Benato nine,* phlogopite, 69-1154 ; islands off *Cape St. Sebastian,* phonolite, 69-2449 ; *Faratsiho,* volcanism, 69-1594 ; *Fiherenana river, Tuléar,* clay minerals, 69-1002 ; *Itasy,* aragonite, calcite, 69-1519 ; *Lake Alaotra,* scheelite, 69-2636 ; *Marojezy massif,* charnockites, 69-2596 ; *Onilahy river, Tuléar,* clay minerals, 69-1002 ; *Ranomena,* charnockites, 69-1597 ; *Sakamasy,* phlogopite deposit, 69-2042 ; *Tsaratanana,* Au, 69-1115
ALAWI, pre-Karroo geology, 69-3407 ; supracrustal rocks, 69-1680 ; *Dzalanyama,* granite, 69-3407 ; *Nyika,* granite, 69-3407
ALAYA, *Pelepah Kanan, Johore,* cassiterite, 69-1479
alayaite, *Thailand,* in skarn, anal., opt., X-ray, 69-3215
alé Karpaty mts. v. Czechoslovakia
alenco v. Italy
allard Park v. Idaho
al'tsevsk-Kilginsk mine, Siberia v. Russian SFSR
ama, Siberia v. Russian SFSR
ambone v. Mozambique
amonia v. Cyprus
an v. Ivory Coast
anasseite, structure, 69-1061
ancelles Alps v. France
anganaxinite, end-member of axinite group, 69-508
anganese, anal. by portable radioisotope XRF analyser, 69-962 ; determination, 69-57 ; determination in cement by atomic absorption, 69-1876 ; geochemistry and economic geology, book, 69-979 ; in axinite, 69-1433 ; in leached zone below Kupferschiefer, 69-1337 ; in standard rocks, 69-56 ; in synthetic tourmaline, 69-340 ; in topaz, influence on colour, 69-3216 ; rapid determination by atomic absorption, 69-1874 ; rapid determination in Fe-ores by atomic absorption, 69-1875 ; salinity indicator in clays, 69-395 ; valency in manganite, 69-1510 ; *Brazil,* resources, 69-2946 ; *Europe,* in Zechstein deposits, 69-415 ; *France,* from borehole, stratigraphical profile, 69-1317 ; *India,* in sediments, 69-3119 ; *Indian Ocean,* in sediments, 69-2174 ; *Italy,* in granite, 69-3098 ; *Mexico,* in apatite, 69-2370 ; *New Zealand,* in plagioclases, 69-3083, in waters, 69-442 ; *Norway,* in thortveitite, 69-3221 ; *Romania,* in ore, 69-1261 ; *Siberia,* distribution in magnetite deposits, 69-355 ; *South Australia,* in laterites, 69-2964 ; *Sweden,* in coexisting biotite and hornblende, 69-2154 ; *USA,* in black shales, 69-2175, in coexisting biotite and hornblende in igneous rocks, 69-1294 ; *Uttar Pradesh,* in soils, 69-3120
- -sicklerite, *Siberia,* in gneiss, anal., 69-607
- compounds, basic arsenate group, structure, 69-191, 192 ; hydroxide, electron-optical information, 69-1732 ; oxide, dendrites produced by bacteria, 69-3076 ; oxide, electronoptical information, 69-1732 ; *France,* oxides in limonite concretions, 69-2521 ; *Tennessee,* hydrous oxide, sorption of Co isotope, 69-398
- deposits, *Morocco,* 69-1098
— minerals, arsenates, 69-2374 ; book, 69-1096 ; *Brazil,* 69-1114 ; *Chile,* oxides in ignimbrites, tuffs and sandstones, 69-1512 ; *Italy,* X-ray, d.t.a., 69-1127 ; *Japan,* detailed description, book, 69-1096 ; *Soviet Far East,* in thermal springs, 69-1364
— nodules, Mössbauer spectra, Mn, Fe, Co, Ni content, X-ray, 69-1161 ; shipboard anal. by portable radioisotope XRF analyser, 69-962 ; *Atlantic Ocean,* Pd, Ir and Au in, 69-1319 ; *Black Sea,* anal., origin, 69-3134 ; *Indian Ocean,* Pd, Ir and Au in, 69-1319 ; *Pacific Ocean,* anal., origin, 69-391, Pd, Ir and Au in, 69-1319
— ore, determination of Th in by XRF, 69-1882 ; metamorphosed protores, 69-231 ; *Brazil,* 69-2027 ; *France,* 69-2985 ; *Guiana shield,* 3 groups, anal., X-ray, 69-230 ; *India,* metamorphosed protores, 69-231, mineralogy of, vredenburgite in, 69-579 ; *Japan,* book, 69-1096 ; *Korea,* mined in limestone, 69-1126 ; *Morocco,* types and origin, 69-2004 ; *Romania,* 69-1335 ; *Utah,* O and C isotope ratios of carbonate replacement, 69-2149 ; *West Pakistan,* estimation of reserves, anal., 69-232
— -Al-Fe ore, formation, book, 69-2822
Manganhedenbergite, *Italy,* anal., 69-1446
Manganiferous rocks, *Italy,* mineralogy, anal., genesis, 69-1446
Manganite, valency of Mn in, anal., 69-1510 ; *France,* 69-2985
Manganobabingtonite, *Siberia,* in skarn, anal., opt., d.t.a., t.g.a., X-ray, 69-3224
Manganocolumbite, anal., opt., 69-582
Manganosiderite, *Siberia,* in sulphide ore deposit, 69-2000
Manganosite, equilibrium^{g} with rhodochrosite, 69-3031
Manganostibiite, X-ray, microanal., 69-2335
Mangansicklerite *v.* manganese-sicklerite
Mangan-tantalo-columbite, *Siberia,* in gneiss, anal., 69-607
Manicouagan v. Canada
Manitoba v. Canada
Manitouwadge, Ontario v. Canada
Manjiröite, isostructural with cryptomelane, 69-2387 ; *Honshu,* in ore deposit, anal., X-ray, d.t.a., sp. gr., VHN, 69-2387
Man'khambo, Urals v. Russian SFSR
Mansehra-Amb v. Pakistan
Mansfield, Nottinghamshire v. England
Mantle *v.* Earth's mantle
Marble, average Au in, 69-3102 ; *Finland,* amino acids in, 69-1259 ; *Haiti,* magmatic assimilation of, 69-747 ; *Idaho,* 69-2483 ; *Ontario,* Ti in micas in, as metamorphic grade indicator, 69-1723 ; *Pyrénées,* mineral associations during metamorphism, 69-2581, relation between magnetism and stucture, 69-837
Marble Canyon v. Texas
Marcasite, Fe Mössbauer spectrum, 69-859 ; structural stability, 69-1957 ; *Baltic Sea,* spherules in sediments, 69-1668 ; *Germany,* Co- and Ni-bearing, 69-2341 ; *India,* 69-2968 ; *Ukrainian SSR,* with coal, distribution and comp., 69-1340 ; *USSR,* Re and Mo content, 69-405
Marcolès, Cantal v. France
Mare Tranquillitatis v. Moon
Margarosanite, *New Jersey,* structure, 69-2892
Margeride massif, Massif Central v. France
Marialite, scapolite end-member, 69-2318
Marico, Transvaal v. South Africa
Marie Byrd Land v. Antarctica
Marien mine, Wölsendorf v. Germany
Marin Co. v. California
Mariposa Co. v. California
Maritime province, Soviet Far East v. Russian SFSR
Maritime Provinces v. Canada
Market Harborough, Leicestershire v. England
Marl, *Algeria,* lithographic, origin, 69-2517 ; *Dorset,* lithographic, origin, 69-2517 ; *France,* evolution of glauconitic to bauxite, 69-3517, intercalated with limestone, EM, 69-3496, lithographic, origin, 69-2517, origin of bauxite, 69-1932 ; *Solenhofen,* lithographic, origin, 69-2517 ; *Switzerland,* metamorphic changes in, 69-1694 ; *Tunisia,* Jurassic, X-ray anal., 69-3117
Marlstone, *USA,* Cd in, 69-2177
Marojezy massif v. Malagasy Republic
Maron mine, Var v. France
Marquette v. Michigan
Marquette Co. v. Michigan
Marra Mamba, Western Australia v. Australia
Marrite, structure, 69-167 ; *Lengenbach,* anal., 69-2352
Marshall Is. v. Pacific Ocean
Martha's Vineyard v. Massachusetts
Martite, *Austria,* 69-1124 ; *Goa,* 69-1123 ; *India,* in gossan, 69-2968 ; *Transvaal,* 69-2986
Marum-Keu range, Ural mts. v. Russian SFSR
MARYLAND, Ordovician tidal flat deposits, 69-2513 ; *Baltimore,* basement rocks, 69-798 ; *Harford Co.,* rutile-apatite-chlorite rock, 69-3313 ; *Hunting Hill quarry, Montgomery Co.,* serpentinite and rodingite, 69-3593 ; *Mountain View lead mine, Union Bridge,* minerals, 69-2680
Maryvale v. Utah
Màscali, Sicily v. Italy
Mascot-Jefferson City v. Tennessee
Masirah Is., Oman v. Arabia
Masonite *v.* chloritoid
Mas Rouge, Bouches du Rhône v. France
Mass absorption, comparison of methods of determination, 69-129 ; rapid measurement with diffractometer, 69-1835
Mass spectrometry *v.* spectrometry, mass
MASSACHUSETTS, goethite, 69-1246 ; *Chesterfield,* albite, cleavelandite, 69-2313 ; *Hampshire Co.,* bronzite, precious serpentine, 69-1246 ; *Holyoke,* volcanic plugs, 69-1611 ; *Martha's Vineyard,* heavy beach sand, 69-2543 ; *Middlesex Co.,* piedmontite, 69-1246 ; *Norfolk Co.,* piedmontite, 69-1246 ; *Orange,* coexisting amphiboles, 69-3253 ; *Shelburne Falls,* zoisite structure, 69-1981
Massiccio Dora Maira v. Italy
Massif Central v. France
Matsusaka, Honshu v. Japan
Mattie, Susa valley v. Italy
Maubach, Eifel v. Germany
Maucherite, *Czechoslovakia,* anal., 69-2385
Mauléon, Basses-Pyrénées v. France
Mauna Kea, Hawaii v. Pacific Ocean
Mauna Loa, Hawaii v. Pacific Ocean
Maures v. France
MAURITANIA, *Hassi-el-Fogra,* alkaline complex, 69-3402 ; *Temimichat crater, Ghallaman,* basalt, 69-3403
Mauvoisin v. Switzerland
Mawsonite, unusual optical properties, 69-1747 ; *Bolivia,* anal., reflectivity, 69-1530

Maymech, Siberia v. Russian SFSR
Mayor Is., North Is. v. New Zealand
Mazaugues, Var v. France
Meandu creek, Queensland v. Australia
Mechernich, Eifel v. Germany
MEDITERRANEAN SEA, leaching of forest litter, 69-2195 ; *Cagliari Gulf,* radioactivity of sediments, 69-2630 ; *Golfe de Lion,* organic matter in sediments, 69-394 ; *Santorin, Nea Kameni,* Fe ore sediment, andesitic dacite volcano, fumarole, 69-2183 ; *Tyrrhenian Sea,* radioactivity of sediments, 69-2630
Mednorudyansk v. USSR
Meionite, scapolite end-member, 69-2318
Melanite, *Ghana,* 69-1936 ; *Italy,* in phonolite, anal., radiocative, 69-3210 ; *Siberia,* in pseudoleucite rocks, TiO_2 in, 69-3400
Melanophlogite, 69-1465
Melanostibian, X-ray, microanal., 69-2335
Melanotekite, indium-, synthesized, 69-2104 ; Sc analogue synthesized, opt., X-ray, 69-308
Melanterite, *Yorkshire,* 69-2871
Meldon, Devon v. England
Melilite, equilibrium data, 69-1216 ; production from gel, 69-2045 ; *Texas,* in melilite-olivine nephelinite, anal., 69-3431
Melnikovite, definite mineral species, opt., X-ray, 69-564
Melonite, *Colorado,* 69-2957
Melteigite, *Italy,* haüyne, in tuff, 69-3388
Mendeleev volcano, Soviet Far East v. Russian SFSR
Mendérès v. Turkey
Mendoza v. Argentina
Meneghinite, diagnostic features, 69-3330 ; *France,* anal., reflectivity dispersion, 69-1489
Mercantour, Alpes Maritimes v. France
Mercury, anomalies over buried deposit, 69-3167 ; determination of microquantities in sulphide ores, 69-947 ; determination of submicrogram quantities in soils, rocks and gas, 69-1877 ; determination in vegetation, 69-1872 ; field determination of nanogram quantities, 69-948 ; in jasperoid samples, 69-1388 ; in soil, gas and air, 69-2787 ; sedimentary deposits genetically associated with submarine volcanism, 69-204 ; *Arizona,* in Navajo Sandstone, 69-3132 ; *Colorado,* in Navajo Sandstone, 69-3132 ; *Italy,* geochemical survey, 69-1383 ; *Nevada,* 69-1121, 2226, anomalous concentration, 69-265 ; *Pacific Ocean,* in sediments, 69-3131 ; *Ukrainian SSR,* syngenetic and epigenetic, 69-1389 ; *USA,* in sphalerite, 69-2339 ; *Utah,* 69-1121, in Navajo Sandstone, 69-3132
— compounds, HgI_2, structure, 69-2912
— ore, *Caucasus,* native As in, 69-2958 ; *Greece,* origin and age, 69-204 ; *Istanbul,* origin and age, 69-204 ; *Siberia,* four mineral associations, 69-2963 ; *Soviet Far East,* 69-1998 ; *Spain,* genesis, production and extraction data, 69-219 ; *Ukrainian SSR,* 69-875, 1128
Mergenov, Siberia v. Russian SFSR
Merioneth v. Wales
Merrihueite, compared with yagiite, 69-2392
Merwinite, equilibrium data, 69-1216 ; production from gel, 69-2045
Mesolite, *Honshu,* in volcanic rocks, anal., opt., X-ray, heat treatment, 69-2325 ; *Oregon,* in basalt, 69-2685
Mesonorms, of granitic rocks, 69-1845
Mesothorium I, *USSR,* in spring-water, determination, 69-1357
Messina, Transvaal v. South Africa
Meta-aluminite, *Utah,* in veinlets in sandstone, opt., sp.gr., X-ray, anal., 69-619
Metadolerite, *Outer Hebrides,* post-Scourian, 69-1707
Metagenesis, *Tadzhik SSR,* zone of, in Cretaceous rocks, 69-2560
Metaheinrichite, electron diffraction data, 69-190
Metalliferous deposits, *Argentina,* Precambrian & Tertiary mineralization, 69-201
Metallogenesis, of geosynclines, 69-251
Metallogenium, *Soviet Far East,* in Mn deposit, 69-1364
Metallogeny, significance of geologic time factor, 69-1087 ; *Siberia,* zoning of regions of activation, 69-2943 ; *Spain,* scheme related to structure, 69-3373
Metamorphic aureole, *Germany, P-T* in, ore minerals in, 69-3526
— facies, applied to hydrothermal mineralization, 69-633 ; development of several during same event under same *P-T* conditions, 69-1703 ; *Italy,* progressive amphibolite to granulite, petrography, anal., 69-1714 ; *Siberia,* relation to deep faults, 69-1997
— —, almandine amphibolite, *Inverness-shire,* 69-1708 ; *Ontario,* rutile-bearing, 69-1723 ; *Skye,* 69-1706
— —, amphibolite, dehydration reactions at lower boundary, 69-2053 ; *Malawi,* 69-3407 ; *Spain,* mica schist, 69-813 ; *Sweden,* 69-2412
— —, blueschist, amphiboles in, 69-3251 ; *California,* coexisting amphiboles in, 69-3254, gradation in metagreywacke, 69-1726 ; *New Caledonia,* coexisting amphiboles, 69-3254 ; *Oregon,* gradation in metagreywacke, 69-1726
— —, chlorite-hornblende-peridotite, 69-669
— —, cordierite-granulite, *Ceylon,* 69-1720
— —, garnet-peridotite, 69-669
— —, granulite, hornblendes in, 69-3249 ; *Adirondack highlands,* 69-2603 ; *Italian Alps,* 69-805 ; *Minnesota,* 69-2613 ; *Quebec,* retrogression to amphibolite by intrusion, 69-1724
— —, greenschist, *India,* 69-3543 ; *Norway,* sulphide deposits in, 69-1093 ; *Sweden,* 69-2412
— —, hornblende-granulite, subfacies of, 69-2601, 2602
— —, hornblende-hornfels, lowest *T* limit, 69-2111
— —, pyroxene-granulite, *Canada,* petrography, 69-1722 ; *Rhodesia,* associated kyanite and enstatite, 69-821
— —, spinel-peridotite, 69-669
— -metasomatic rocks, comp. of biotite in, 69-1631
— minerals, influence of H_2O on reactions, 69-2053 ; zone and facies, 69-1700
— rocks, abundance of N, 69-344 ; An content of coexisting plagioclases, 69-1548 ; and salination of natural water, 69-2208 ; average Au in, 69-3102 ; coexisting amphiboles in, 69-3252 ; computer programme for calculation of chem. anal. from modal anal., 69-1842 ; concretions used to determine original sedimentary environment, 69-2571 ; Fe and Mg in coexisting garnet and clinopyroxene, 69-2261 ; origin of garnet in, 69-1215 ; staurolite-quartz compatibility, 69-2108 ; water in, 69-2053 ; *Aldan,* age, 69-21 ; *Alps,* K/Rb increases with metamorphism, 69-3270 ; *Banffshire,* limestones, clay minerals, X-ray, d.t.a., E 69-107 ; *Brazil,* low grade pelitic, an 69-2178 ; *British Columbia,* 69-35 *Broken Hill,* microstructures in, 69-74 *California,* metagreywacke, 69-172 *Colorado,* in ring complex, anal., a 69-3451 ; *France,* age, 69-10, granul facies rock in amphibolite facies ba ment, anal., 69-2579 ; *Germany,* ag 69-1804, ultrabasic, anal., petrogene 69-3564 ; *Idaho,* staurolite zone, *P &* during crystallization, 69-2607 ; *Inv ness-shire,* syenite, petrology, 69-170 *Italian Alps,* basic, 69-805, Ivrea zo petrography, anal., 69-1714, nom clature, 69-807, petrography, an genesis, 69-1711 ; *Italy,* 69-2586, pet graphy, 69-2562, degree of Fe oxidati 69-1347, gneisses and carbonates, an 69-1710 ; *Japan,* carbonaceous matter 69-2597, geology of occurrences, an 69-2282 ; *Liberia,* petrology, 69-259 *mid-Atlantic ridge,* types, anal., 69-155 *Minnesota,* K/Ar and Rb/Sr biotite ag 69-2613 ; *Oregon,* metagreywacke, 1726 ; *Outer Hebrides,* metadolerit 69-1707 ; *Pamirs,* mineral assemblag 69-2593 ; *Poland,* 69-815 ; *Pyren* relation between structure and magn ism, 69-837 ; *Rhodesia,* Precambri 69-3572 ; *Romania,* crystalline schi 69-1716, stratigraphy, 69-1717 ; *Russ SFSR,* greenschist, chloromelanite glaucophane zones of meta-extrusiv petrography, opt., 69-1721 ; *Sardin* petrography, 69-1641 ; *South Dak* geology, 69-719 ; *Spain,* crushed grani & orthogneiss, 69-3556, mineral pa genesis with hypersthene, 69-258 *Tasmania,* n.r.m., 69-2664 ; *Wyomi* in ring complex, anal., age, 69-3451
— textures, book, 69-2821
Metamorphism, anchimetamorphic zo 69-803 ; & diagenesis, chemical stabil in border zone, 69-803 ; & ferruginos of amphiboles, 69-2283 ; experimen simulation, 69-1207 ; formation of rich solutions during, 69-1210 ; frictio heat during, quantitative evaluati 69-797; H_2O–CO_2 regime in metamorp systems, 69-3140 ; illite crystallinity measure of, 69-2830 ; jadeite-glau phane type, degree related to amphib comp., 69-520 ; mineral facies parameters, 69-1207 ; mineral fac principle, problems of application, 802 ; of chondrites, 69-2251 ; of ma rocks, 69-630 ; of siliceous dolomitic li stone, thermodynamics of, 69-25 relationships of kinetic and pluto 69-802 ; synopsis of classification syste 69-1700 ; *Adirondack mts.,* 69-2612 ; *A* isochemical, 69-801 ; *Alto Adige,* tra tional between mesozone and catazo 69-2585 ; *Arizona,* of volcanic ro 69-2406 ; *Austrian Alps,* 69-814 ; *C fornia,* upside-down zonation along thr 69-1726 ; *Carlsberg ridge,* of basalts spilites, 69-2451 ; *Czechoslovakia,* 69-22 *France,* 69-3523, clay minerals as in cators, 69-113 ; *Germany,* of basement, 69-1804 ; *Himalayas,* related to thrusti 69-3537 ; *India,* of coal, 69-781, related Himalayan orogeny, 69-3574, 35 *Inverness-shire,* of syenite, 69-1708 ; *Ital Alps,* Ivrea zone, 69-1714 ; *Italy,* anal K/Rb in metamorphic sequence, 69-31 *Kamchatka,* glaucophane, of meta salts, 69-420 ; *Karelia,* of residu 69-3519 ; *Lake District,* 69-2415 ; *Ma*

tamorphism (*contd.*)
Central, aureole type zones, 69-3555 ; *Minnesota*, granulite facies, 69-2613 ; *Moldavian SSR*, 69-3395 ; *New South Wales*, of volcanic greywackes, 69-779 ; *Norway*, 69-3546 ; *Ontario*, grade indicated by Ti in micas, 69-1723 ; *Oregon*, upside-down zonation along thrust, 69-1726 ; *Pamirs*, of Ca-poor and Ca-rich rocks, 69-2593 ; *Quebec*, of Fe formation, 69-2280 ; *Russian SFSR*, of Fe formation, 69-3567 ; *Scotland*, Barrow zones, geological guide, 69-1896, segregation in amphibolites, anal., 69-2577 ; *Siberia*, pyrite ores by granite, 69-2000 ; *Skye*, almandine-amphibolite facies, 69-1706, evolution of Moine Nappe, 69-1706 ; *South Australia*, pre-tectonic crystallisation, 69-2600 ; *Sweden*, principles for differentiation, 69-2576 ; *Switzerland*, isograds in amphibolites, 69-3563, of clays and marls, 69-1694 ; *Urals*, and gas/liquid inclusions in quartz, 69-3170, hypabyssal, of andesites and basalts, 69-2566 ; *Zambia*, 69-1589, 1590
—, contact, *California*, 69-3434, of carbonate rocks, 69-3137 ; *Germany*, of gneisses and schists, anal., 69-3526 ; *Idaho*, 69-2606, batholith aureole, 69-780 ; *Pamirs*, 69-2593 ; *Perthshire*, aureole, 69-1896 ; *Quebec*, C and O isotopic comp. of limestone altered, 69-2196, retrogression of granulite to amphibolite facies, 69-1724 ; *Switzerland*, 69-1697 ; *Texas*, of carbonate rocks, 69-3137
—, hydrothermal, *Tien-Shan*, near veins, anal., 69-793
—, regional, *P* indicated by stability fields of minerals, 69-306 ; progressive, H_2O–CO_2 regime, 69-3141 ; types in fold regions, 69-3539 ; *Alps*, increasing effect on biotites and rocks, 69-3270 ; *Austria*, three cycles, 69-3527 ; *circum-Pacific region*, 69-3541 ; *France*, polymetamorphism, 69-3551 ; *Germany*, ultrabasic rocks, 69-3564 ; *India*, 69-3578, 3583, 3584, greenschist, of gabbro, 69-3543, of pelitic rocks, 69-3576, of Precambrian, 69-3585 ; *Inverness-shire*, 69-1708 ; *Italian Alps*, 69-804 ; *Italy*, of Tertiary sediments, 69-3561 ; *Massif Central*, 69-3550, 3552 ; *Mont Blanc*, of granite, 69-3562 ; *New South Wales*, of basic lavas, 69-2598, zones in Tasman geosyncline, 69-2599 ; *New Zealand*, 69-824, 3540 ; *North Carolina*, oxidation during, 69-1727 ; *Pyrénées*, mineral associations in gneiss and marble, 69-2581 ; *Rhodesia*, Precambrian and dolerites, 69-3572 ; *Russian SFSR*, origin of jadeite in amygdales, 69-1721 ; *Scotland*, of minor intrusions, 69-1704 ; *South-West England*, 69-3547 ; *Spain*, 69-813, 2584, 3550, 3557, 3558 ; *Sweden*, of Fe ore, 69-2033
—, retrograde, related to folding, 69-1703 ; *Canada*, of pyroxene granulites, 69-1722 ; *Germany*, of ultrabasic rocks, 69-3564 ; *Michigan*, of gneiss, anal., 69-3592 ; *Quebec*, induced by intrusion, 69-1724 ; *Skye*, 69-1706 ; *Spain*, 69-3557
—, thermal, *Argyllshire*, of phyllites, chemistry, anal., 69-2564 ; *Minnesota*, 69-2613
Metanováčekite, electron diffraction data, 69-190
Metapelites, biotites in, 69-3268
Metaperidotite, *Spain*, sill, petrography, 69-659
Metasediments, partial melting, 69-2119 ; *Idaho*, in cores of domes, 69-2606 ; *India*, khondalite–leptynite group, 69-822
Metasomatism, Mg, mechanism, 69-2071 ; related to serpentinization, 69-796 ; *Caucasus*, of basic rocks, 69-3396 ; *Cornwall*, cause of banding in granitic rocks, 69-3457 ; *Germany*, Mg, 69-2300 ; *Hungary*, alkaline, 69-3105 ; *India*, 69-3584 ; *Poland*, K, 69-751 ; *Siberia*, diopside vein-rocks, magnetite & phlogopite deposits, 69-794 ; *Sudbury*, Na, 69-210 ; *USSR*, zonation of Be mineralization, 69-1139
Metatorbernite, electron diffraction data, 69-190
Metazeunerite, electron diffraction data, 69-190
Meteor Crater v. Arizona
Meteorite craters, *Haig*, impact pit, 69-3177 ; *Henbury*, structural geology, 69-1406 ; *Lake Lappajärvi*, 69-500 ; *Meteor Crater, Arizona*, 69-3192, thermoluminescence, 69-2635 ; *Reis*, bibliography, 69-2250, new allotropic form of C in, 69-3349
Meteorites,
Allegan, 69-2238
Angro dos Reis, 69-3179
Arltunga, 69-478
Assisi, 69-1395
Bath Furnace, 69-3175
Bjurböle, 69-2248
Bondoc, 69-486
Borgo San Donino, 69-1395
Brannau, 69-478
Brenham, 69-2241
Bruderheim, 69-484, 2248
Buei Muerto, 69-1054
Bununu, 69-3179
Canyon Diablo, 69-1524, 3191, 3194, 3351
Chainpur, 69-1399, 1404
Cherokee Springs, 69-2238
Cockburn, 69-489
Cocklebiddy, 69-2243
Cold Bokkeveld, 69-3186
Colomera, 69-2392
Coopertown, 69-1524
Credo, 69-2245
Darmstadt, 69-3182
Deelfontein, 69-3193
Djati-Pengilon, 69-3183
Doolgunna Station, 69-482
Efremovka, 69-2238
Elenovka, 69-485
Fenbark, 69-2245
Forksville, 69-3183
Gibeon, 69-3187
Goose Lake, 69-480
Granes, 69-474, 2234
Guareña, 69-2238
Haig, 69-3178
Hvittis, 69-2246
Ivuna, 69-1402, 3180
Jajh deh Kot Lalu, 69-481
Khohar, 69-1404
Kodaikanal, 69-2239
Kopjes Vlei, 69-478
Koso-sho, 69-2244
Kunashak, 69-485
Manbhoom, 69-3183
Mokoia, 69-1399
Monte Milone, 69-1395
Mount Egerton, 69-3178
Murnpeowie, 69-478
Nallah, 69-2243
Narraburra, 69-1524
Novo-Urei, 69-490
Orgueil, 69-491, 492, 493, 1402, 3186
Parnallee, 69-2242
Patwar, 69-2238
Pillistfer, 69-2238
Pultusk, 69-470
Rancho de la Pila, 69-478
Rupota, 69-2238
Saint-Séverin, 69-2232, 2233, 2238
Saratov, 69-485
Seres, 69-3182
Serra de Magé, 69-3180
Sharps, 69-1397
Siena, 69-1400, 3181
Spearman, 69-1524
Stannern, 69-487
Steinbach, 69-153
Tunguska, 69-2217
Udei Station, 69-3188
Vigarano, 69-483
Wichita Co., 69-3351
Woiamo, 69-488
Youndegin, 69-3351
—, ages of Ca-rich achondrites, 69-1403 ; anal. of polymict breccia chondrite, 69-3181 ; asteroidal origin for eucrites & mesosiderites, 69-1403 ; atmospheric ^{14}C at time of Tunguska, 69-2217 ; carbonaceous chondrites, lunar origin, 69-1394 ; chondrites, origin in cooling nebula, 69-3171 ; cosmic-ray-produced H & He isotopes in stones, 69-475 ; deformation of olivine & pyroxene in stones, 69-3173 ; determination of tr. elements, 69-967 ; EM study of micrometeoroids, 69-472 ; heavy cosmic nuclei tracks, 69-3174 ; isotope changes in, relation to solar modulation effect on galactic cosmic rays, 69-473 ; K/Ar ages invalid, 69-3194 ; lunar origin, 69-1394 ; lunar or asteroidal origin for eucrites, 69-1403 ; metallographic structure of 5 irons, 69-478 ; metamorphism of chondrites, 69-2251 ; mineralogy & petrography of chondrites & mesosiderite, 69-2238 ; neutron activation anal. of precious metals, 69-2803 ; 'organized elements' in carbonaceous meteorites, survey, 69-3185 ; origin of round-body structures in carbonaceous, 69-491 ; Pb-Pb age, 69-486 ; preparation of polished thin sections, 69-1826 ; pressure on impact, velocity and origin of iron by alloy comparison, 69-3191 ; radiation ages of Ca-rich achondrites, 69-3179 ; radionuclides measured, 69-474 ; Rb/Sr age of hypersthene chondrites, 69-3175 ; reaction rim of chondrule, 69-483 ; research in U.K., 1966 conference report, 69-469 ; rotational movement during flight, 69-1404 ; sampling of meteor showers, 69-472 ; *T* of formation of chondrule rim, 69-483 ; textures and origin of chondrules, 69-3171 ; Widmanstätten angle orientation, tables, 69-1393
—, chemistry, Ag in chondrites, 69-2235 ; Al in stones & pallasitic olivines, 69-2240 ; Al isotopes in stones, 69-3180 ; Al/Fe ratio in, 69-2240 ; Al/Si ratio in chondrites, 69-2240 ; anal. of amphoterite, 69-2233 ; anal. of chondrites & mesosiderite, 69-2238 ; anal. of chondrules, 69-1397 ; anal. of oldhamite from chondrite, 69-2246 ; As, Sn and Sb in chondrites, 69-3184 ; Au in, 69-2231 ; B in carbonaceous chondrites, 69-1402 ; C distribution in cement of carbonaceous, 69-3186 ; Ca isotopes in chondrite, 69-2234 ; Cd in chondrites, 69-2235 ; Cs in stones, 69-967 ; cosmic ray effect on Kr, 69-485 ; daubréelite in irons, 69-2247 ; effect of low *T* hydrothermal process, 69-1402 ; fission Xe in chondrites, 69-484 ; fractionation of Al, Ca & Mg in chondrites, 69-2249 ; Ga, Ge, In & Ir in chondrites, 69-1396 ; Ge, As, Sb, Cu, Cr, Mo, Ag, In, Zn, Pd, Ga & S in irons, 69-2236 ; isotopic comp. of C phases in carbonaceous, 69-490 ; K & Ar in irons, 69-3194 ; Kr isotopes in stones, 69-485 ; metallic Cu in stones, 69-2237 ; metal-silicate fractionation, 69-1396 ; Mg, Ni, Co, Al, Mn, Fe & Si in irons & stones, 69-1405 ; Na isotopes in amphoterite, 69-2232 ; Ni-Fe comp. & textures in mesosiderites, 69-3188 ; Ni, Ga, Ge and Ir in irons, 69-3189 ; of silicates and metal in iron, 69-2239 ; olivine in carbonaceous chondrite, 69-492, 493 ; Pd in chondrites, 69-2235 ; Pb in iron, 69-486 ; Pb isotope ratios, 69-486 ; primordial noble gases in howardite, 69-3179 ; Pu/Xe & I/Xe decay intervals are concordant, 69-484 ; rare gases in phases of an iron, 69-3193 ; relationships among enstatite chondrites, 69-3176 ; Sc determination, 69-71 ; Se in chondrites, 69-2235 ; Si in metal phase, 69-3190 ; system Fe–MgO–SiO_2–O_2 & chondrite petrology, 69-1220 ; Te in chondrites, 69-2235 ; *T* of last equilibration, calculation, 69-481 ; tr. elements in irons, 69-2236 ; U in stones, 69-487 ; V/Co/Ni ratios in stones, 69-370 ; Xe in chondrules and matrix, 69-2248 ; Xe isotopes in stones, 69-485 ; Xe, origin in chondrites, 69-1399 ; Zn in chondrites, 69-2235
—, minerals, anal. of feldspar from chondrites, 69-1401 ; chlorapatite and whitlockite in chondrites, 69-3183 ; cohenite decomposed to graphite and ferrite in iron, 69-480 ; ε-Fe in irons, X-ray, 69-1524 ; feldspar and pyroxene, 69-2239 ; feldspar in chondrites, comp. & structure, 69-1401 ; ferrosilicon, 69-1767 ; high tridymite, 69-153 ; krinovite, new mineral in irons, 69-3351 ; lattice parameters of

Meteorites (*contd.*)
kamacite in enstatite chondrites, 69-3177 ; metallography and microprobe study of pallasite, 69-2241 ; petrofabric anal. of chondrites, 69-2242 ; pyrrhotite and pyrrhotite-troilite in chondrites, 69-1395 ; relationships among enstatite chondrites, 69-3176 ; schreibersite with cohenite in iron, 69-480 ; significance of oldhamite in enstatite chondrites, 69-481 ; spinel in chondrule, 69-483 ; taenite structure in iron, 69-3187 ; 2 types of troilite in chondrites, 69-3182 ; X-ray anal. of chondrites, 69-1395, 1398 ; X-ray study of feldspars from chondrites, 69-1401 ; X-ray study of kamacite in irons, 69-479 ; yagiite in iron, 69-2392
Methane, C isotopes in, 69-446 ; inclusions in quartz, 69-3296 ; in inclusions, 69-1367 ; isotopic comp. indicates maturity and migration in natural gas, 69-3159 ; origin of, 69-446 ; *France,* inclusions in quartz, 69-2214
Methylene iodide, in mineral separations, recovery, 69-928
Meurthe-et-Moselle v. France
Mexico, hematite, 69-2061 ; *Alamos, Sonora,* alamosite, 69-141 ; *Baja California,* continental margin submarine geology, 69-2549, tonalite, 69-2484 ; *Cerro de Mercado, Durango,* apatite, 69-602, 2370 ; *Gulf of California,* SiO_2 accumulation, 69-3144 ; *Moctezuma, Sonora,* emmonsite, sonoraite, 69-2396, poughite, 69-620 ; *Parícutin,* Ni/Co & mafic index in rocks, 69-374 ; *Zacatecas,* greigite, 69-2342
Meyerhofferite, stability field, 69-2094
Meygal, Velay v. France
Mežica v. Yugoslavia
Miagliano v. Italy
Mica, Ar stability in, 69-452 ; charge balance between ions, 69-2301 ; dehydroxylation, rehydroxylation, oxidation, reduction, IR, 69-3053 ; –garnet equilibria, 69-2130 ; in lamprophyres, anal., opt., crystallization of, 69-3263 ; K/Ar dating, 69-2738 ; Mössbauer study, 69-2899 ; structural models for polymorphism and polytypism, 69-2901 ; *T* and intensity of OH vibration bands, 69-2885 ; two stages of decrepitation, 69-1449 ; *Canada,* anal., XRF, X-ray, opt., d.t.a., t.g.a., magnetic susceptibilities, age, polymorphism, paragenesis, 69-532 ; *New Jersey,* Zn-rich, anal., 69-3271 ; *North Carolina,* 69-880 ; *Pakistan,* anal., d.t.a., 69-269 ; *Russian SFSR,* formation of, in olivinite and melilite, 69-536 ; *Siberia,* Li, 69-876 ; *Switzerland,* age, 69-14 ; *Utah,* polymorphs, 69-1118 ; *Vosges,* 69-8 ; *Western Australia,* from pegmatites, 69-270
Michigan, *Keweenaw,* Ni/Co and mafic index in lavas, 69-374 ; *Marquette,* retrograde metamorphism of gneiss, 69-3592 ; *Marquette Co.,* geochemical prospecting, 69-1391, geology, 69-1606
Microcline, Ar stability in, 69-452 ; calculated powder patterns, 69-2757 ; electrical conductivity, 69-855 ; high-*T* thermodynamic properties, 69-1167 ; in granite, lattice energy, paragenesis with oligoclase, 69-2308 ; loss of radiogenic Ar from perthitic, 69-2738 ; *Egypt,* in granite rocks, chem., opt., X-ray, 69-1469 ; *France,* obliquity in granite, opt., X-ray, 69-3276 ; *Montana,* zonal distribution in granodiorite, 69-2309 ; *New Mexico,* radioactive, in monzonite, 69-2480
— perthite, *India,* in pegmatite, anal., genesis, 69-2311
Microgranite, *Antarctica,* petrology, anal., 69-712 ; *Hungary,* geochemistry, 69-1281 ; *Sardinia,* petrography, genesis, 69-2430 ; *South China Sea,* anal., petrography, 69-1599
Microhardness *v.* hardness
Micrometric analysis, Coulter counter determination of zircon, 69-31 ; use of EM in, 69-990
Microorganisms, effect on S content in petroleum, 69-450
Microperthite, *Italy,* in porphyroids, 69-2440
Microprobe analysis *v.* electron probe microanalysis
Microscope, lunar and planetary petrographic, 69-1825
Microscopy, phase contrast for refr. ind. determination, 69-2747 ; two-beam interferometry, 69-2746
Microsommite, *Vesuvius,* X-ray, anal., 69-617
Microtektites *v.* tektites
Mictite, *Germany,* isotypic, anal., origin, 69-2444
Mid-Atlantic ridge v. Atlantic Ocean
Middlesex Co. v. Massachusetts
Middletown v. Connecticut
Mie, Honshu v. Japan
Miedzianka v. Poland
Miedzianki te *v.* sandbergite
Migmatite, *Finland,* O isotopes in minerals, 69-1295 ; *France,* age, 69-907, bordering granite, 69-3554, leaching, anal., 69-1329 ; *Italy,* Fe oxidation, 69-1347 ; *Norway,* 69-3546 ; *Sardinia,* petrography, genesis, 69-2430 ; *Spain,* basement rocks, 69-3559
Migmatitic rocks, *Ditrau,* 69-1715 ; *Italy,* in schists, chem., opt., 69-2588
Migmatization, *Bohemian massif,* 69-790
Milan, Erie Co. v. Ohio
Milarite, Raman spectrum, 69-3607
Mill canyon, Eureka and Lander Counties v. Nevada
Mill products, preparation of grain mounts, 69-28
Millerite, *Czechoslovakia,* 69-2385 ; *Hautes Pyrénées,* in mineralized vein, anal., 69-562
Millevaches massif, Massif Central v. France
Mimetite, IR spectrum, 69-1078 ; phosphatian, IR, 69-2923 ; structure, 69-1978
Mina Remolinos Nuevo, Atacama v. Chile
Minas Gerais v. Brazil
Mindigite, CoOOH in, 69-2338
Mineral grains, rapid methods of counting, 69-200 ; surface area measurement by isotope exchange, 69-1731
— separation, flotation of nepheline from feldspar, 69-1830 ; silt-size in heavy liquid, 69-1832 ; ultrasonic dispersion of sediments, 69-1831
Mineralization, hypogene, gaseous phase in post-magmatic solutions, 69-2405; *Alaska,* related to Cretaceous granites, 69-197 ; *Armorica,* 69-2936 ; *Bulgaria,* chromite, 69-3312 ; *Cumberland,* Pb-Cu-Zn, 69-2415 ; *Derbyshire,* 69-3163 ; *Devon,* 2 types, 69-1566 ; *England,* relation to basement, 69-1100 ; *France,* palaeogeographic control, 69-2022 ; *Lake District,* 69-2415 ; *Montana,* Pb-Zn, 69-3165 ; *Nevada,* associated with magnetic anomaly, 69-2002 ; *New South Wales,* Cu-Mo at hornfels/granite junction, 69-792 ; *Pennines,* 69-3163 ; *Pyréné* skarn, scheelite deposit, 69-201 *Romania,* Pb-Zn, 69-3390 ; *Russi SFSR,* Au, influence of host ro 69-3078 ; *Siberia,* rare-metal, 69-8 3264, relation to deep faults, 69-199 *Soviet Central Asia,* depth of formatio 69-2941 ; *Spain,* As, Cu, Pb, Sb, Sn, 69-3373 ; *Tien Shan,* rare metal a skarn-polymetal, 69-2944 ; *Uganda,* la stage sulphide, 69-3164 ; *Utah,* U in vei 69-1118
Mineralogy, applied, book, 69-9 experimental work on deep-seated p cesses, 69-1156 ; extracting system machine processing of literature, 69-184 *Cornwall,* book, 69-1895, 1900 ; *Devo* book, 69-1895, 1900
Minerals, analysis, book, 69-1897 ; assem lages of ore deposits, 69-348 ; boo 69-981 ; colour dependent on structu 69-1735 ; correlation of phys. and che properties, computer programm 69-1843 ; determination of density powders, 69-26 ; determination of Th 69-1867 ; diagram to determine comp. system $MnCO_3$–$CaCO_3$–$MgCO_3$, 692-35 distribution of symmetry types, 69-172 dynamically stressed genesis, 69-353 ferromag., frequency distribution of e ment concentration, 69-3074 ; floccu tion of slurries, 69-2824 ; layer-latti epitaxial deposition, 69-2824 ; quanti tive electron probe microanal., 69-280 rapid determination of Ca & Mg 69-1856 ; rapid determination of F 69-1869 ; staining of, 69-1833, 183 statistical chemical model for associati of, 69-625 ; surface solubility a flotation by fatty acids, 69-300 thermodynamic property tables, 69-84 universal stage for optical investigati of grains, 69-923 ; W in, gravimet estimation, 69-952 ; water bath solubility studies, 69-2756 ; *Austr* zones discordant to structure, 69-81 *Brazil,* resources, 69-2946 ; *Californ* book, 69-1898 ; *Canada,* for the collect 69-2672 ; *Colorado,* resources, 69-294 *Cornwall,* collector's guide, 69-190 *Devon,* collector's guide, 69-190 *Finland,* index and bibliography, bo 69-985 ; *Ontario,* list of, 69-1776, Q X-ray, 69-2384 ; *Oregon,* pyroge stability in volcanoclastic rocks, 69-25 *Quebec,* in nepheline syenite, chem., op X-ray, 69-1605 ; *Tadzhik SSR,* gene relation between clay and clastic sediments, 69-1941 ; *Western Austral* resources, 69-196 ; *Zambia,* occurrenc 69-1589; *v.* also new minerals
Minette, mica crystallization in, 69-326 mineral assemblage, 69-313
Minguetite, name rejected, 69-1463
Mingulay, Inverness-shire v. Scotland
Mining, *Africa,* amazing antiquity, 69-19 *Portugal,* present and past, 69-1116
Minnesota, bytownite, 69-3290 ; *Babbi Embarras,* antiperthite, 69-3283 ; *Dulu* age of gabbro and sill, 69-2716 ; *Gran Falls, Montivideo,* metamorphism, 69-26
Minor elements *v.* trace elements
Minsk v. Belorussian SSR
Minusinsk, Siberia v. Russian SFSR
Mir, Siberia v. Russian SFSR
Mirabi ite, IR, 69-2637 ; *California,* evaporites, 69-1324 ; *Utah,* ion activi in brine, 69-1358
Mirošov, Moravia v. Czechoslovakia

ssouri, *Pilot Knob,* Fe deposits, 69-1612
tchell v. Oregon
ridatite, *France,* in pegmatite, opt., 69-869
tterberg, Salzburg v. Austria
us river v. Russian SFSR
xed layer minerals, *England,* in Chalk, 69-109 ; *Europe,* in Chalk, 69-109
iyagi, Honshu v. Japan
iyamori, Iwate v. Japan
kulwe v. Tanzania
oak lake, Manitoba v. Canada
oçamedes v. Angola
octezuma, Sonora v. Mexico
octezuma mine, Sonora v. Mexico
odal analysis, by density gradient columns and point counting, 69-927 ; precision and components of variance, 69-1828
odugno, Bari v. Italy
oel Goedog, Merioneth v. Wales
ohole, lanthanides in basalt, 69-1627
ohorovičić discontinuity, 69-2704 ; age, origin, 69-3459 ; *France,* 69-2695
ohuru, Carpathians v. Romania
oine nappe, *Skye,* metamorphic evolution, 69-1706
ojave desert v. California
oke creek, South Is. v. New Zealand
olasse, *Azerbaijan SSR,* clay mineralogy, 69-2869
OLDAVIAN SSR, igneous & tectonic history, 69-3395 ; *Baymakliya,* S isotopes in pyrite, anhydrite & gypsum, 69-2197
oldavites, anal. of bituminous matter, C & gaseous inclusions, 69-496 ; internal strain by Sénarmont method, 69-498
Molidvişul-Nedei, Carpathians v. Romania
Molybdenite, *Arizona,* 69-2980 ; *Italy,* in gneiss, 69-1793 ; *New South Wales,* 69-225 ; *Siberia,* trigonal, in carbonatite, X-ray, 69-1495 ; *Uzbek SSR,* Pt group elements in, 69-2147
Molybdenum, assay, 69-60 ; determination by atomic absorption spectrophotometry, 69-2784 ; distribution in lignite seam, 69-2186 ; in iron meteorites, 69-2236 ; separation from granitic melts, 69-351 ; *Alaska,* in sediments, 69-463 ; *Arizona,* 69-2223 ; *Azov Sea,* distribution in, 69-429 ; *Black Sea,* distribution in, 69-429, in sediments, 69-1315, in Fe-Mn concretions, 69-3134 ; *British Columbia,* biogeochemistry, 69-3166 ; *Colorado,* geochemical anomaly, 69-2568, in stream water, 69-3156 ; *Derbyshire,* in stream sediments, 69-3162 ; *Europe,* in Zechstein deposits, 69-415 ; *France,* in shales, 69-407 ; *Kazakh SSR,* in sulphides, 69-405 ; *Malagasy Republic,* in scheelite, 69-2636 ; *Massif Central,* in granitic rocks, 69-657 ; *Morocco,* in metamorphosed limestone, 69-199 ; *Nevada,* 69-462, anomalous concentration, 69-265 ; *New Mexico,* 69-2228 ; *New Zealand,* in waters, 69-441 ; *Romania,* in ore, 69-1261 ; *Staffordshire,* in stream sediments, 69-3162 ; *Taupo,* in thermal waters, 69-441 ; *Tunisia,* in marls & limestones, 69-3117 ; *USA,* in black shales, 69-2175 ; *Utah,* 69-1120 ; *Uzbek SSR,* in sulphides, 69-405
— compounds, molybdates, energetic properties, geochemical separation, solubility products, 69-1253 ; $NaVMoO_6$, structure, 69-1068 ; oxide, whiskers, 69-176
— ores, formation in self-activating zones, 69-2942 ; *Alaska,* 69-2977
— -Bi ores, *New South Wales,* in pipes in roof zone of granite intrusion, 69-225
— -W ores, *Transbaikalia,* age, 69-2737
Molybdomenite, *Ontario,* in U mine, with clausthalite, X-ray, opt., 69-599
Monastero, Alpi Occidentali v. Italy
Monazite, 69-618 ; Bi in, 69-3223 ; determination of Sm, Eu, Gd & Dy in Th compounds from, 69-970 ; in granites, rare earth content, 69-378 ; lanthanides in, 69-3070 ; structure, 69-1977 ; U as by-product of processing, 69-220 ; XRF determination of Y, 69-62 ; *Colorado,* in carbonate veins, 69-1778 ; *Czechoslovakia,* alluvial deposit, origin, 69-2368 ; *East Pakistan,* in beach placers, 69-2009 ; *Georgia,* geology and appraisal of fluvial placers, 69-200 ; *Illinois,* in sands, 69-2550 ; *Italy,* in apatite, rare earths in, 69-3339 ; *New Zealand,* in stream sediments, 69-397 ; *North Carolina,* geology and appraisal of fluvial placers, 69-200 ; *South Africa,* in pegmatite, 69-2712, occurrence & reserves, 69-2940 radiometric survey, 69-2939 ; *South Carolina,* geology & appraisal of fluvial placers, 69-200 ; *Virginia,* geology & appraisal of fluvial placers, 69-200 ; *Washington,* in residual clay, anal., 69-2367
MONGOLIAN REPUBLIC, albitite with apogranites, 69-2462 ; fluorite distribution patterns, 69-2035
Mono Basin v. California ; Nevada
Mono Co. v. California
Mono Craters v. California
Monosiallitization, 69-1328
Monothermite, studies in USSR, 69-1921
Montagne Noire v. France
Montaigut-en-Combrailles, Massif Central v. France
MONTANA, metals in black shales, 69-2175 ; phosphorite, 69-1146 ; Zn in magnetite, 69-1481 ; *Bell Creek,* oil, 69-3126 ; *Boulder,* granodiorite pluton, 69-2478, plutonism, tectonics, volcanism, 69-2406 ; *Clark range,* Pb-Zn mineralization, 69-3165 ; *Crystal mt., Ravalli Co.,* thortveitite, 69-2675 ; *Highwood,* analcime, analcitite, 69-1476 ; *Lewis range,* Pb-Zn mineralization, 69-3165 ; *Rader creek, Boulder,* alkali feldspar, 69-2309 ; *Stillwater,* laurite, Pt minerals, sulphide minerals, 69-2349, orthopyroxene, 69-917, plagioclase, 69-1474
Mont Blanc v. France
Mont Tremblant Park, Quebec v. Canada
Monte Amiata, Tuscany v. Italy
Monte Biaena, Trento v. Italy
Montebrasite, *Devon,* in pegmatite, X-ray, 69-3341
Monte Cimino, Tuscany v. Italy
Monte Ehie Horn, Novara v. Italy
Monte Massico, Caserta v. Italy
Monte Orfano, Lake Maggiore v. Italy
Monte Rosso, Grosseto v. Italy
Monte Somma v. Italy
Monte Tundoni, Sardinia v. Italy
Montevecchio, Sardinia v. Italy
Monte Vulture, Lucania v. Italy
Monte Zeda, Lake Maggiore v. Italy
Montferrier v. France
Montgomery Co. v. Arkansas ; Maryland
Montgomeryite, anal., X-ray, 69-3338
Monti-Berchidda, Sardinia v. Italy
Monticellite, equilibrium data, 69-1216 ; production from gel, 69-2045 ; Raman spectrum, 69-3607
Monticello Box, Sonoro Co. v. New Mexico
Montiferru, Sardinia v. Italy
Montivideo v. Minnesota
Montmorillonite, absorption spectra, 69-82 ; beidellite–nontronite series, 69-1936 ; benzonitrile complexes, IR, 69-94 ; Ca-, hydrothermal origin, 69-2876 ; c.e.c., determination of exchange sites, 69-90 ; charge balance between ions, 69-2301 ; chem. classification by thermal methods, 69-2826 ; comp. & structure, anal., 69-1910 ; crystalline swelling, 69-93 ; dimethyldioctadecyl ammonium derivatives, 69-2831 ; edge-to-face bonds, 69-2824 ; facies, 69-1009 ; H-, 69-89 ; hydroxyl absorption bands, IR, 69-2825 ; in vertisols, 69-1936 ; Li-, structural rearrangement on heating, 69-2847 ; NH_4-, 69-90 ; non-ideal crystals, X-ray, 69-146 ; OH stretching frequencies of synthetic interlayers, 69-1913 ; optical study of particle size, 69-82 ; orientation of ethylene glycol monoethyl ether on, 69-2836 ; particle size, relation to lyotropic series, 69-82 ; -polystyrene complexes, 69-2835 ; porosity spectrum, 69-2754 ; position of exchangeable cations and water molecules, 69-2843 ; pyridinium-, IR study of chlorobenzene sorbed on, 69-1920 ; release of Fe, K and Ca, 69-1210 ; selective absorption of n-alkyl alcohol-bromide mixtures, 69-95 ; stretching vibrations of adsorbed water, IR, 69-2845 ; surface area determination, 69-2829 ; swelling in water, effect of alkylammonium ions, 69-93 ; *T* & intensity of OH vibration bands, 69-2885 ; thermal alteration, 69-2846 ; X-ray, 69-33 ; *Atlantic Ocean,* from microfaunal tests, 69-538 ; *California,* from tuffs, 69-2554 ; *England,* in Chalk, origin, review of hypotheses, 69-109, in fuller's earth, origin, 69-1677 ; *Europe,* in Chalk, origin, review of hypotheses, 69-109 ; *Hampshire basin,* origin, 69-112 ; *Hawaii,* in marine environment, 69-1008 ; *Italy,* Na-, diagenetic, 69-3520 ; *Sicily,* in basalt, d.t.a., X-ray, 69-2427 ; *USA,* in continental shelf sediments, X-ray, 69-2551
— -chlorite, X-ray, d.t.a., anal., 69-1908
Mont-Pilat, Loire v. France
Montreal, Quebec v. Canada
Montrose Co. v. Colorado
Mont St. Hilaire, Quebec v. Canada
Mont Vourinos, Macedonia v. Greece
Monument Peak, Pasayten river v. Washington
Monzodiorite, *Italy,* anal., 69-3382
Monzogabbro, *Italy,* anal., 69-3382
Monzoni v. Italy
Monzoni mts. v. Italy
Monzonite, *Colorado,* age, 69-2714 ; *Fiji,* age, 69-7 ; *Italy,* age, 69-2726, age, origin, 69-3389, syenitic, anal., petrography, 69-3384
—, biotite-quartz, *Colorado & Wyoming,* in ring complex, anal., age, 69-3451
—, quartz, *California,* intrusive, age, anal., 69-3434 ; *Italy,* anal., petrography, 69-3384 ; *New Mexico,* radioactive bodies in, 69-2480 ; *Vietnam,* xenolithic, anal., petrography, 69-3424
Monzonitic rocks, *Italy,* age, 69-11
MOON, capture hypothesis, 69-2707 ; depth of loose material from Ranger photographs, 69-2705 ; origin and evolution, 69-1795 ; origin of craters, 69-1797 ; rilles, 69-2705 ; ring structures and nature of maria, 69-1796 ; Surveyor 5 results, 69-2706 ; *Mare Tranquillitatis,* O, Si & Al at, 69-2706 ; *Tycho,* volcanism, 69-898

Moonstone, phase boundaries, 69-1052
Moo Wick, Shetland Is. v. Scotland
Moramanga v. Malagasy Republic
Moravia v. Czechoslovakia
Morcles nappe v. France
Morcote-Halbinsel, Tessin v. Switzerland
Mordenite, Na-, synthesis, 69-314 ; *Crimea,* in effusive rocks, genesis, 69-1477
Morganite, *Western Australia,* localities, 69-1245
Morion *v.* quartz, smoky
Morocco, age determinations, 69-899 ; age of Miocene-Pliocene boundary, 69-1798 ; age of tuff and phonolite, 69-2711 ; Mn, 69-1098 ; Mn mineralization, 69-2004 ; *Aït-Ahmane,* gersdorffite, 69-1493 ; *Azegour, Haut Atlas,* Be, Cu, Mo, W, in metamorphosed limestone, 69-199 ; *Azrou-Melloul, High Atlas,* diaspore, pyrophyllite, volcanic rocks, 69-1769, zunyite, 69-1423 ; *El Hamman mine,* inclusions in fluorite, 69-2215 ; *Jebel Irhoud,* baryte deposits, 69-273 ; *Rehamna,* mica schists, 69-3569 ; *Tachgagalt, Anti-Atlas,* chlorite nodules, 69-1461, despujolsite, 69-621, henritermiérite, 69-3347
Moroto mt. v. Uganda
Morrison quadrangle, Jefferson Co. v. Colorado
Morro do Niquel, Minas Gerais v. Brazil
Morvan v. France
Mosabani, Bihar v. India
Mössbauer spectra, Fe in pyrite & marcasite, 69-859 ; ^{57}Fe in sulphides, 69-1037 ; ferberite, 69-2925 ; hulsite, 69-1040 ; limonite, 69-585 ; ludwigite–paigeite series, 69-1040 ; micas, 69-2899 ; oxidic tin spinels, 69-1039 ; synthetic Fe_7S_8, 69-1038 ; wolframite, 69-2925
Motta Sant' Anastasia, Sicily v. Italy
Mouana mine v. Gabon
Mounana v. Gabon
Mounanaïte, synthetic, anal., formula, 69-3348 ; *Gabon,* new mineral, reflectivity, d.t.a., X-ray, 69-3348
Moun Caou, Basses Pyrénées v. France
Mound Lake, Lynn & Terry Counties, v. Texas
Mount Adams v. Washington
Mount Belaya, Soviet Far East v. Russian SFSR
Mount Bischoff, Tasmania v. Australia
Mount Bonga v. Angola
Mount Egmont, North Is. v. New Zealand
Mount Fuji, Honshu v. Japan
Mt. Girnar, Saurashtra v. India
Mount Hakone v. Japan
Mt. Isa, Queensland v. Australia
Mount Jefferson, High Cascade range v. Oregon
Mount Kaputar, New South Wales v. Australia
Mount Katmai v. Alaska
Mount Lofty, South Australia v. Australia
Mount Lyell, Tasmania v. Australia
Mount Misery volcano, Leeward Is. v. West Indies
Mount Morgan, Queensland v. Australia
Mount Mulat, Predazzo v. Italy
Mount Pleasant, New Brunswick v. Canada
Mount Royal, Quebec v. Canada
Mount Tchivira v. Angola
Mount Wheeler mine v. Nevada
Mount Wright area, Newfoundland & Quebec v. Canada
Mount Zaccon, Valsugana v. Italy
Mountain View lead mine, Union Bridge v. Maryland
Moyenne Dordogne, Massif Central, v. France
Mozambique, *Alto Ligonha,* bismutite, 69-874 ; *Alto Molocué,* bismutite, 69-874 ; *Mambone,* interstratified clay, 69-86 ; *Namacotche, Alto Ligonha, Zambezia,* spodumene, 69-268, zircon, 69-1409 ; *Nampoça, Alto Ligonha,* ilmenorutile, strüverite, 69-1480 ; *Nuaparra, Zambezia,* wolframite, 69-581 ; *Tete,* fluorite deposit, 69-2994 ; *Zambezia,* bismutite, 69-3333
M.P. = Madhya Pradesh
Mrovdag ridge, Lesser Caucasus v. Azerbaijan SSR
Msauli mine, Transvaal v. South Africa
Mud, factors for erosion of, 69-3490 ; new classification of marine, 69-3481 ; *Algeria,* C & N in, 69-3118
Mudstone, *British Isles,* foundation characteristics, 69-838
Mullite, changes in fireclay bricks with *T,* 69-280 ; congruent melting, 69-3036 ; *South Africa,* in kyanite eclogite, anal., 69-2595
Mundford, Norfolk v. England
Mundwara, Rajasthan v. India
Murcia v. Spain
Murgtal, St. Gallen v. Switzerland
Muri-Silli-Jhalida v. India
Murun, Siberia v. Russian SFSR
Murunskiĭ massif, Siberia v. Russian SFSR
Mururoa v. Pacific Ocean
Muscovite, age by Ar/Ar method, 69-24 ; competitive adsorption isotherms, divalent organic cations, 69-96 ; composition & structure, anal., 69-1910 ; dehydroxylation, rehydroxylation, oxidation, reduction, IR, 69-3053 ; effect of Fe films on exchange capacity, 69-2181 ; new high *T* phase, 69-3052 ; non-ideal crystals, X-ray, 69-146 ; Shubnikov group structure, 69-1949 ; structure, 69-2900 ; synthesis, 69-1222 ; two stages of decrepitation, 69-1449 ; X-ray, 69-33 ; *Angola,* age, 69-2 ; *Ardnamurchan,* Al in, controls of phengitic component, 69-2288 ; *Azov,* chromian, in xenolith, anal., opt., d.t.a., X-ray, 69-535 ; *Bavaria,* euhedral with Ti-rich biotite centre, 69-3391 ; *Canada,* anal., XRF, X-ray, opt., d.t.a., t.g.a., magnetic susceptibilities, polymorphism, paragenesis, age 69-532 ; *Caucasus,* in granitic rocks, Nb, Ta and F in, 69-383 ; *France,* in granite, anal., 69-2416 ; *Georgian SSR,* in granitic rocks, Nb, Ta & F in, 69-383 ; *India,* in pegmatite, anal., opt., paragonite in, 69-2286 ; *Italian Alps,* variation in comp., opt., X-ray, 69-533 ; *Lake District,* in greisen, anal., 69-2415 ; *Maine,* pseudomorphs after staurolite, 69-826 ; *Massif Central,* in granitic rocks, anal., origin, 69-657, in leucogranites, genesis, 69-1635 ; *North Carolina,* green, Fe-rich, 69-1727 ; *Ontario,* in conglomerate, age, 69-903, Ti in, 69-1723 ; *Sardinia,* in microgranite, opt., genesis, 69-3262 ; *Siberia,* in granitoids, anal., 69-3264 ; *Swiss Alps,* variation in comp., opt., X-ray, 69-533 ; *Switzerland,* in veins and rocks, chem., opt., 69-1450 ; *Western Australia,* mined from pegmatites, 69-270
—, lithium-, *Minas Gerais,* 69-2287
— -kaolinite-quartz mixture, changes on firing, pore size distribution, 69-98
Mylonite, *France,* anal., petrography, 69-2580 ; *India,* structural anal., 69-3585 ; *mid-Atlantic ridge,* magnetism & petrology, 69-864
Myrmekite, exsolution, 69-3280 ; proportio of quartz in, anal., 69-544
Myrmekitic intergrowths, *Transvaal,* of C minerals, 69-214
Mysore v. India

Nabburg, Bavaria v. Germany
Nacrite, O–H stretching vibrations, I X-ray, 69-2844
Naegi, Honshu v. Japan
Nagano, Honshu v. Japan
Nagolnaja Tarasovka v. USSR
Nagolny ridge, Donets basin v. Ukrainia SSR
Nagyagite, *Colorado,* 69-2957
Nahcolite, *California,* in Quaterna deposits, 69-2538
Nakina, Ontario v. Canada
Nallah, Western Australia v. Australia
Nalzen, Ariège v. France
Namacotche, Zambezia v. Mozambique
Nampoça, Alto Ligonha v. Mozambique
Nancy, Meurthe-et-Moselle v. France
Nangiles mine, Cornwall v. England
Naples v. Italy
Naranjito quadrangle, Puerto Rico v. We Indies
Nari v. Israel
Narnaul, Patiala v. India
Narragansett pier v. Connecticut
Narsarsukite, *Quebec,* in hornfels, op X-ray, chem., 69-1429
Natal v. South Africa
Natroalunite, *Argentina,* with dolomit chem., opt., X-ray, 69-1507
Natrojarosite, *Argentina,* opt., chen X-ray, 69-1507 ; *Spain,* 69-598
Natrolite, *Cornwall,* in gabbro, 69-2666
Naujaite, *Greenland,* anal., 69-635
Nausahi v. India
Neagra Sarului valley, Carpathians Romania
Nea Kameni v. Mediterranean Sea
Nedeiu, Carpathians v. Romania
Needle mts. v. Colorado
Nefza v. Tunisia
Neira v. Spain
Nellore, Andhra Pradesh v. India
Neodigenite, *France,* 69-2979; *Oslo,* 69-29
Neodymium, in rhabdophane, 69-3343 *New Zealand,* in stream sediments, 69-3
Neon, in achondrite meteorites, 69-3179
Nepal, ceramics, industrial feasibili study, 69-99, 531 ; china clay, an 69-99 ; nature of clays and fireclay 69-531 ; *Banderkhola,* talc, ana 69-531 ; *Ningale,* talc deposit, 69-531
Nepheline, decomposition by NaF & C 69-1204 ; electrical conductivity, 69-85 2652 ; flotation separation from feldsp 69-1830 ; glass-crystal transformatio heat of transformation, 69-1168 ; X-ra 69-2125 ; *France,* in basalts, 69-241 *Norway,* in nepheline syenite & pegmati anal., X-ray, opt., structure, 69-2317
— basalt *v.* basalt, nepheline
— rocks, *India,* origin, 69-3464; *Siber* geochemistry, genesis, 69-1643
— syenite *v.* syenite, nepheline
Nephelinite, *New South Wales,* pip xenoliths in, 69-3138 ; *Siberia,* layered sill, 69-1619, Nb & Ta in, 69-379 *Uganda,* anal., opt., origin, 69-2496
—, melilite-olivine, *Texas,* anal., 69-3431
—, olivine, *Germany,* lanthanides & Y i 69-1304 ; *Texas,* anal., 69-3431
Nephelinization, *India,* 69-3464
Neptunite, structure, 69-2895
Neuquén v. Argentina

utron activation analysis, application of oincidence counting, 69-2805 ; lantha- ide elements in rocks, 69-69 ; of Au, 9-965 ; of Lu in minerals, 69-966 ; of Pd, Os, Ir, Pt in rocks, 69-72 ; of precious metals in rocks, ores & meteorites, 9-2803 ; of Sc in meteorites, 69-71 ; of race U, 69-968 ; of U in geological samples, 69-73 ; RE chromatograms, 9-70 ; Zr & Hf, 69-2804
diffraction, computer programme for corrections, 69-2882 ; anal., of hydroso- dalite, 69-158
EVADA, argillite, 69-3509 ; Be belt, 69-1140 ; chert, 69-3509 ; desert varnish, 69-2184 ; glass from pantellerite ash-flow, 69-2164 ; metals in black shales, 69-2175 ; olivine basalts, 69-2407 ; shale, 69-3509 ; turquoise deposits, 69-1243; *Carson desert, Ragtown,* gaylussite, 69-1072 ; *Comstock,* Ag, Hg, 69-1121 ; *Connors Pass quad- rangle, White Pine Co.,* heavy minerals, 69-2545 ; *Dome mt.- Timber mt. caldera,* lavas, 69-2479 ; *Elko Co.,* age of plutons, 69-1811, volcanic complex, 69-2406 ; *Ely,* mineralization, 69-2002 ; *Esmeralda Co.,* volcanic rocks, ages, 69-2816 ; *Gold Acres, Lander Co.,* Au, Ag & other metals, 69-265 ; *Hot Creek range, Nye Co.,* ignimbrites, 69-2406 ; *Kane Springs Wash, Lincoln Co.,* volcanic rocks, 69-2816 ; *Mill Canyon, Cortez quadrangle, Eureka & Lander Counties,* anomalous metals, 69-2226 ; *Mono basin,* structural and volcanic history, 69-2406 ; *Mount Wheeler mine,* sphenes in granitoids, 69-3205, zircons in granitoids, 69-3204 ; *Nye Co.,* intermediate igneous rocks, volcanic rocks, 69-2816 ; *Reno,* celadonite, 69-1455 ; *Ruth,* mineralization, 69-2002 ; *Sheep Creek range, Lander Co.,* geochemi- cal & geophysical anomalies, 69-1386 ; *Shoshone range,* baryte, bedded in chert, 69-2040 ; *Silent Canyon, Nye Co.,* comendite, trachyte, 69-2816 ; *Silver Peak,* sedimentation, volcanism, 69-2406 ; *Steamboat Springs, Washoe Co.,* hydro- thermal alteration of rocks, 69-1359, S-oxidizing bacteria, 69-1361 ; *Swales mt., Elko Co.,* mineralization in contact zone, 69-462 ; *Tenabo, Lander Co.,* Au, Ag & other metals, 69-265 ; *test site,* ground- water, zeolites, site-studies, book, 69-2816 ; *Tonopah,* Ag, Hg, 69-1121
evada Co. v. California
ewberyite, *Peru,* from struvite, 69-2373 ; *Victoria,* structure, 69-182
ew Brunswick v. Canada ; New Jersey
ew Caledonia v. Pacific Ocean
ew England batholith, New South Wales v. Australia
ewfoundland v. Canada
EW HAMPSHIRE, goethite, herderite, 69-1246 ; *Cheshire Co.,* gemstones, 69-1246 ; *Connecticut Lakes,* geology, 69-1610
ew Idria v. California
EW JERSEY, antiperthite, 69-2605 ; *Brook- ville,* feldspathoidal syenite, 69-3458 ; *Franklin,* chlorophoenicite, 69-191, nor- bergite, 69-2889, Zn and Mn amphiboles, 69-528 ; *Hoboken,* artinite, 69-2686 ; *New Brunswick,* stalactites, 69-2678 ; *North Mine Hill, Franklin,* margarosa- nite, 69-2892 ; *Rutgers University, New Brunswick,* azurite, 69-2684 ; *Sterling hill,* Mn-phlogopites, Zn-rich micas, 69-3271 ; *Trotter dump, Franklin,* miner- als, 69-2679
NEW MEXICO, Be belt, 69-1140 ; loeweite, sulphate evaporite minerals, 69-1508 ; Zn in magnetite, 69-1481 ; *Ambrosia lake,* age of U ores, Ra migration, 69-1813, jordisite, U ore, 69-1777 ; *Caballo mts., Sierra Co.,* radioactive rocks, 69-2480 ; *Carlsbad,* evaporites, potash, 69-2537 ; *Carlsbad caverns,* attapulgite, 69-1922 ; *Kermac Sec. 10 mine, McKinley Co.,* ferroselite, 69-2620 ; *Monticello Box, Sierra Cuchillo, Sonoro Co.,* anomalous metals, 69-2228 ; *Pajarito mt., Otero Co.,* geology, 69-1609 ; *San Juan basin,* U deposits, 69-2947 ; *Valles caldera,* rhyolites, 69-2406
New minerals, 25th list, 69-610 ; *Ontario,* QM, X-ray, 69-2384
——, unnamed, *British Columbia,* Ni hydro- xide, anal., X-ray, 69-1535 ; *Cyprus,* Co and Ni arsenides, anal., 69-1531 ; *Czechoslovakia,* Ni-As low *T* ore, 69-2385 ; *Ethiopia,* Ni compounds in laterites, 69-1527 ; *Finland,* hydrated oxide of Cr, anal., X-ray, sp.gr., reflectivity, 69-1536 ; *Kazakh SSR,* V-As germanite, anal., H., reflectivity, X-ray, 69-613 ; *Ontario,* ε phase of Ag-Sb, X-ray, 69-1532 ; *Siberia,* Bi telluride, H., reflectivity anal., X-ray, 69-612, Pd(Bi,Pb), X-ray, 69-1525, Pd,Pb, X-ray, 69-1525
New Rambler mine, Albany and Carbon Counties v. Wyoming
New rock-type, *Siberia,* a kyanite pyrox- enite, 69-1586
New South Wales v. Australia
NEW YORK, *Adirondacks,* plagioclase, 69-1474, garnet in granulite facies, 69-2603 ; *De Kalb, St. Lawrence Co.,* talc deposit, 69-2988 ; *Di Rubbo mine, Croton-on-Hudson,* emery, 69-881 ; *Gouverneur mining district,* talc and associated amphiboles, 69-145 ; *Herkimer Co.,* spha- lerite-galena, 69-2677 ; *Niagara Stone Division quarry,* minerals, 69-2682 ; *Ohio quadrangle, Adirondacks,* geology, 69-2612 ; *Oneida Co.,* sphalerite-galena, 69-2677 ; *Sanford hill, Tahawus,* anor- thosite, gabbro, magnetite-ilmenite, 69-718 ; *Snowy mt., Adirondacks,* anortho- site–charnockite series, 69-3591; *Staten Is.,* artinite, hydromagnesite, 69-2686; *Warren Co.,* serendibite, 69-1051 ; *Wills- boro,* clinozoisite structure, 69-1981 ; *Woodbury,* fluorescent conglomerate, 69-2688
NEW ZEALAND, antigorite, 69-1447 ; emis- sion spectroscopy of obsidians, 69-468 ; epidote in hot spring systems, 69-2212 ; ironsand, 69-284 ; K_2O/Na_2O in basic igneous rocks, 69-358 ; O isotope palaeo- temperatures, 69-1784 ; pseudobrookite in ironsand, 69-283, 284 ; rutile in iron- sand, 69-284 ; statistics in geochemical prospecting, 69-455 ; titanomagnetite, heating experiments, 69-283 ; volcanism and seismicity, 69-1657 ; *Auckland Islands,* volcanic succession, 69-702, petrography, 69-703 ; *Ross volcano, Auckland Islands,* petrography, 69-702, 703
——, NORTH IS., Cainozoic volcanology, 69-749 ; geochemistry of rhyolitic rocks, 69-1309 ; granitic xenoliths, 69-707 ; tr. elements in ignimbrite & rhyolite, 69-745 ; volcanic rocks, 69-3083 ; *Atiamuri,* graphic texture in xenoliths, 69-707 ; *Auckland,* ultramafic nodules, 69-3199 ; *Chickens Islands,* diorite-granodiorite stock, 69-704 ; *Coppermine Is.,* diorite- granodiorite stock, 69-704 ; *Hen Is.,* diorite-granodiorite stock, 69-704 ; *Hinuera,* graphic texture in xenoliths, 69-707 ; *Huka,* granodiorite xenoliths, 69-707 ; *Mayor Is.,* pantellerite geo- chemistry, trachybasalt, 69-1308 ; *Mt. Egmont, Taranaki,* andesites. 69-709 ; *Tarawera,* granodiorite xenoliths, 69-707 ; *Taupo,* thermal waters, 69-441 ; *Taupo-Rotorua area,* rhyolites, 69-708 ; *Taupo zone, Tauhara volcano,* geology and structure, 69-765 ; *Tokaanu,* thermal waters, 69-443 ; *Tokatoka,* calc-alkaline rocks, 69-705, igneous rocks, 69-706, volcanic rocks, 69-705 ; *Waihi,* comp. of thermal waters, 69-443 ; *Wairakei,* ther- mal waters, 69-441, waters from drill- holes, 69-442
——, SOUTH IS., metamorphic belts & orogenesis, 69-3540 ; sillimanite-garnet- biotite gneiss, metamorphism, 69-824 ; *Buller Gorge,* Be in breccia, 69-354 ; *Davis creek,* almandine, biotite, 69-824 ; *Dunedin,* analcite, 69-1476, analcite tinguaite, 69-1476, palaeomagnetism of lavas, 69-861 ; *Kakanui,* xenoliths, 69-710 ; *Longwood range, Southland,* geo- chemical prospecting, 69-465 ; *Moke creek, Otago,* Cu in soil, 69-464, Cu ore, 69-213 ; *Paparoa range,* RE in sedi- ments, 69-397 ; *Snark creek,* almandine, biotite, 69-824
Ngwenya v. Swaziland
Niagara Stone Division quarry v. New York
NICARAGUA, fiamme in ignimbrites, origin, 69-756
Niccolite, *Czechoslovakia,* replacement by layer-structure ore, 69-2385
Nickel, anal. by portable radioisotope XRF analyser, 69-962 ; -bearing intrusions, structural anal., 69-207 ; destruction of thermoremanence, 69-2654 ; in andesites, 69-2168 ; in carbonaceous schists, 69-1345 ; in Fe meteorites, 69-3189 ; in leached zone below Kupferschiefer, 69-1337 ; in pyrite, 69-1264 ; in standard rocks, 69-56 ; in synthetic tourmaline, 69-340 ; in topaz, influence on colour, 69-3216 ; ionic radius, 69-2138 ; Ni/Co and mafic index in igneous rocks, 69-374 ; rapid determination by atomic absorption, 69-1874 ; Ni/Co/V geochemical trends, 69-370 ; salinity indicator in clays, 69-395 ; *Alaska,* in serpentinite, 69-2948 ; *Aleutian Islands,* Ni/Co and mafic index in rocks, 69-374 ; *Azerbaijan,* in ultramafic rocks, spectro- graphic data, 69-373 ; *Black Sea,* in Fe-Mn concretions, 69-3134 ; *California,* Ni/Co and mafic index in rocks, 69-374 ; *Czechoslovakia,* in pyrite, 69-2144 ; *Europe,* in Zechstein deposits, 69-415 ; *France,* from borehole, stratigraphical profile, 69-1317 ; *Hawaii,* Ni/Co and mafic index in rocks, 69-374 ; *Illinois,* in oil and shale, 69-1366 ; *Indian Ocean,* in sediments, 69-2174 ; *Massif Central,* in granitic rocks, 69-657 ; *Mexico,* in apatite, 69-2370 ; *Michigan,* Ni/Co and mafic index in lavas, 69-374 ; *Mysore,* in silicates, origin, 69-3274 ; *New Zealand,* in augites, hornblendes and hypersthenes, 69-3083 ; *Pacific Ocean,* in water from cores, 69-1320 ; *Parícutin,* Ni/Co & mafic index in rocks, 69-374 ; *Pennsyl- vania,* Ni/Co and mafic index in rocks, 69-374 ; *Rajasthan,* in soils, 69-3121 ; *Romania,* in ore, 69-1261, in volcanites, 69-1307 ; *St. Kitts,* in lavas, 69-724 ; *Skaergaard,* Ni/Co & mafic index, 69-374 ; *South Australia,* in ferruginous

Nickel (*contd.*)
zones of laterites, anal., 69-2964 ; *Tasmania,* Ni/Co & mafic index in rocks, 69-374 ; *USA,* in black shales, 69-2175, in sea-water, 69-2200 ; *Urals,* in bituminous shales, 69-3133 ; *Western Australia,* development of resources, 69-196
— compounds, disulphides, diarsenides, sulpharsenides, structural stability, 69-1957 ; *France,* hydroxide in nodule, X-ray, d.t.a., t.g.a., 69-586
— minerals, *British Columbia,* hydroxide, anal., X-ray, 69-1535 ; *Cyprus,* arsenide with Co, 69-1531 ; *Czechoslovakia,* Ni-As layer structure, 69-2385 ; *Mysore,* antigorite, anal., X-ray, origin, 69-3274 ; *South Africa,* occurrence and reserves, 69-2940
— ore, *Minas Gerais,* description of deposit, 69-208 ; *Ontario,* mineralographic characteristics, paragenesis, 69-209 ; *Spain,* with peridotites, 69-1572 ; *Sudbury,* origin, 69-210 ; *USSR,* geology and metallogeny, 69-1090
— -Cu ore, *Canada,* pyrite nodules in, 69-1131
— partition geothermometer, *Hawaii,* applied to lava lake minerals, 69-2501
Nietverdiend, Transvaal v. South Africa
Nièvre v. France
Niger river v. Nigeria
Nigeria, granite anal., 69-380 ; pyrochlore, 69-2378 ; *Bokkos, Jos Plateau,* inclusions in trachyte, 69-3456 ; *Gombe,* plagioclase, 69-3288 ; *Kainji,* materials surveys for dam project, 69-676 ; *Kila-Warji,* ring complex, 69-1624 ; *Liruei,* granite, 69-1623 ; *Niger river,* igneous and metamorphic rocks, 69-676 ; *Zarandah,* ring complex, 69-3406
Niggli values, programme for calculation on I.B.M. 1620, 69-936
Niigata, Honshu v. Japan
Nile delta v. Egypt
Nilgiri v. India
Ningale v. Nepal
Niobium, geochemistry, occurrence, references, 69-1300 ; in carbonate solutions, 69-1184 ; in wolframite, 69-3319 ; *Caucasus,* in micas, 69-383 ; *Georgian SSR,* in micas, 69-383 ; *Idaho,* in syenite, 69-2470 ; *Nigeria,* in granite, 69-380 ; *Pennsylvania,* variation in diabase-granophyre, 69-382 ; *Queensland,* in bentonite, anal., 69-111 ; *Russian SFSR,* in schists, 69-1346 ; *Siberia,* in cassiterite, 69-1112, in volcanic rocks, 69-379 ; *Tasmania,* variation in diabase-granophyre, 69-382 ; *Ukrainian shield,* in cassiterite, 69-3318 ; *Urals,* in apogranite, 69-381
Niobophyllite, *Labrador,* in paragneiss, anal., X-ray, sp.gr., opt., 69-1540
Nishisioda-mura, Honshu v. Japan
Nitrate deposits, *Antarctica,* genesis, 69-2553 ; *Chile,* genesis, 69-2553 ; *Ross Ice Shelf,* mineral comp., origin, 69-411
Nitrates, determination in saline minerals, 69-2780
Nitratine, *Ross Ice Shelf,* in soils, 69-411
Nitrogen, abundance and isotopic comp. in crustal materials, origin in volcanic emanations, 69-344 ; solid phase ^{15}N for radiogenic Ar determination, 69-80 ; *Algeria,* organic, in silts and muds, 69-3118; *Siberia,* in carbonates and carbonatites, 69-390 ; *Mediterranean,* removal from forest litter, 69-2195 ; *Yakutia,* in diamonds, plutonic source, 69-2328
Niue, Cook Islands v. Pacific Ocean
Nodules, *Texas,* phosphate, 69-3510 ; *Yorkshire,* sideritic, tr. elements in, 69-3112
Nomenclature, petrographic, scheme for Spitzbergen, 69-626, 627
Nontronite, dimethyldioctadecyl ammonium derivatives, 69-2831
Norbergite, crystallography, twinning, 69-2254 ; *New Jersey,* structure, 69-2889
Nord v. France
Nordenskiöldine, & analogues, synthesis, comp., X-ray, sp.gr., opt., 69-2095
Nordmarkite, *Norway,* Rb-Sr isotopic studies, 69-2727
Norfolk v. England
Norfolk Co. v. Massachusetts
Noril'sk, Siberia v. Russian SFSR
Norite, *India,* 69-3469, metamorphosed, petrography, 69-822 ; *Western Australia,* cumulates, 69-1622
—, cordierite-, *Aberdeenshire,* Sr isotopes, petrogenesis, 69-2497
Normandy v. France
Norman Wells, Northwest Territories v. Canada
Norms, according to Niggli, Fortran II programme for calculation, 69-935 ; Fortran IV programme for calculation, 69-934 ; programme for calculation on I.B.M. 1620, 69-936, 938
Norsethite, synthesis, 69-2077, 2513
North America, apatite-bearing magnetite ores, 69-2028 ; Fe formations, origin, 69-3533 ; kobellite, 69-2386 ; quartz diorite line, 69-2469 ; *Animikie,* banded Fe ore, riebeckite, 69-1095 ; *Gulf of Mexico,* continental slope sediments, 69-3597 ; *Rocky mts.,* rhyolites, 69-3357
North Carolina, acids in soils, 69-3125 ; amphibolites, 69-3544 ; monazite deposits, 69-200 ; ultramafic rocks, 69-3100 ; Zn in magnetite, 69-1481 ; *Conrad hill mine, Davidson Co.,* minerals, 69-2681 ; *Cowee Valley, Macon Co.,* ruby deposit, 69-338 ; *Glendon,* tourmaline, 69-1430 ; *Grandfather mt.,* Fe-rich green muscovite, metamorphism, 69-1727, phyllonites, 69-1342 ; *Hillsborough,* tourmaline, 69-1430 ; *King's mt.,* eucryptite and bikitaite, 69-555 ; *Orange Co.,* spilites, 69-1613; *Ore Knob mine, Ashe Co.,* copper, 69-880 ; *North Hardin mine, Ashe Co.,* mica, 69-880 ; *South Hardin mine, Ashe Co.,* mica, beryl, 69-880 ; *Staley,* tourmaline, 69-1430 ; *Stanly Co.,* accretionary lapilli, 69-2609 ; *Stem,* tourmaline, 69-1430
North Hardin mine, Ashe Co. v. North Carolina
North Is. v. New Zealand
North Lily mine, East Tintic district v. Utah
Northern Territory v. Australia
North Mine hill, Franklin v. New Jersey
North Sea v. Europe
Northupite, *California,* in Quaternary deposits, 69-2538
Northwest Territories v. Canada
North Wheal Jane mine, Cornwall v. England
Norway, age of ash in peat bog, 69-1807 ; bytownite, 69-3290 ; error in age of eclogite, 69-2728 ; prehnite, 69-3275 ; U and Th survey, 69-222 ; *Andörja Is., Troms,* magnetite deposits, geosynclinal sediments, 69-3545 ; *Bamble,* albitites, 69-1633, oligoclase twin lamellae, 69-3286 ; *Bamle,* enstatite, 69-1398 ; *Drammen, Oslo,* bavenite in biotite granite, 69-1758 ; *Egersund,* palaeomagnetism and origin of dolerite dykes, 69-86
Eivolden, Tysfjord, yttrofluorite, 6
1486 ; *Farsund,* farsundite, 69-6
regional geology, 69-637 ; *Fen,* carbo
atite, 69-3361 ; *Feragen,* awaruite, 6
1478 ; *Flakstadøy, Lofoten,* plagiocla
69-1474 ; *Folldal,* sulphide ore deposi
69-1093 ; *Hiåsen, Bamble,* gabbro, 6
1559 ; *Høgetveit,' Evje,* tombarthite, 6
618 ; *Hundholmen,* cerfluorite-yttrocer
69-1486 ; *Iveland,* thortveitite, 69-322
Kongsberg, history of silver mini
69-217 ; *Kragerø,* albitites, 69-163
Odegaard, chlorapatite, 69-602 ; *Oslo,*
mineralization, 69-2973, Rb/Sr studies
igneous rocks, 69-2727 ; *Oterøy,* peridoti
69-1560 ; *Risör, Aust-Agder,* migmat
complex, 69-3546 ; *Sør-Fron, Oppla*
halotrichtite, 69-1757 ; *Stjernöy,* feldsp
nepheline, 69-2317 ; *Tafjord,* age of gne
69-16 ; *Tråk,* Pb-Zn ores, 69-24
Trondhjem, basement rocks, 69-79
Ulefoss, Fen, Th in rødberg rock, an
69-222
Nosean, from hydrothermal alteration
clay minerals in NaOH solution,
2134 ; hydrothermal reactions of m
tures with cancrinite, 69-2125 ; SO
ions in, 69-156 ; structure, 69-15
sulphate-, solid solution with chlor
sodalite, 69-2126 ; X-ray, 69-2125
Nottinghamshire v. England
Novara v. Italy
Novara di Sicilia, Sicily v. Italy
Novarupta v. Alaska
Nova Scotia v. Canada
Novoselovsk, Kerch peninsula v. Russi SFSR
Nowackiite, structure, 69-167
Nowa Ruda v. Poland
Nowshera, West Pakistan v. Pakistan
Ntem v. Cameroon
Nuanetsi v. Rhodesia
Nuaparra v. Mozambique
Nuclear quadrupole resonance, in bour
nite, 69-168 ; of stephanite, 69-1959
— —tensors, ^{27}Al in kyanite, 69-133
— reactor materials, *South Africa,* occ
rence and reserves, 69-2940
Nuggihalli, Mysore v. India
Nunivak Is. v. Alaska
Nye Co. v. Nevada
Nyika v. Malawi
Nyiragongo v. Congo
Nyíreskút II mine, Szőc v. Hungary

Oahu, Hawaii v. Pacific Ocean
Oberfranken v. Germany
Oberhalbstein v. Switzerland
Oberharz v. Germany
Obří důl, Krkonoše mts. v. Czechoslovakia
Obsidian, electrical conductivity, an
69-856 ; electrical conductivity and
and K ratios, 69-3612 ; Na diffusion
69-3106 ; *New Zealand,* emission spect
scopy, 69-468
Ocean floor spreading *v.* sea floor spread
Oceanic ridges, and eustatic changes
sea level, 69-2697
— trenches, heat flow and volcanis
69-757
Oceans, geochemistry of evolution
69-424 ; silica balance of, 69-3145, 314
Sr isotopes in, 69-1349
Odegaard v. Norway
Odenwald v. Germany
Odikhincha, Siberia v. Russian SFSR
Odinochnoye, Siberia v. Russian SFSR
Oetztal, Tyrol v. Austria

IO, *Milan, Erie Co.,* whewellite in septarian nodules, 69-609
io, Maryvale v. Utah
io quadrangle, Adirondacks v. New York
l, crude, origin of fatty acids in, 69-3124 ; effect of microorganisms on S content, 69-450 ; H and S isotopes and sedimentation basin characteristics, 69-457 ; ^{15}N in, 69-344 ; origin, 69-2216 ; origin of S isotopes, 69-450 ; protein residues with porphyrins in, 69-3080 ; *France,* in septarian nodules, comp., origin, 69-3127 ; *Illinois,* Ni and V in, anal., 69-1366 ; *Montana,* crude, isoprenoid hydrocarbons in, 69-3126 ; *Russian SFSR,* free radicals in, e.p.r., 69-1365 ; *Siberia,* time of inflow into reservoir rocks, 69-2559 ; *USSR,* possible field, 69-1371
ilfield, *Siberia,* age from proportion of Ti minerals, 69-2694
jén, Málaga v. Spain
ka, Quebec v. Canada
kanogan Co. v. Washington
kayama, Honshu v. Japan
kbang mine, Gyeongsang v. Korea
kehampton, Devon v. England
kenite, synthesis, 69-1205
khotsk, Sea of, v. Russian SFSR
KLAHOMA, diagenesis in oolitic limestone, 69-784
ldhamite, in chondrite, anal., 69-2246 ; petrological significance in meteorites, 69-481
lekma-Vitim mts., Siberia v. Russian SFSR
ligoclase, calc. powder pattern, 69-1836 ; high pressure annealing, 69-3048 ; in granite, lattice energy, paragenesis with microcline, 69-2308 ; *Italy,* in porphyrite, twinning, 69-2316 ; *Norway,* comp. and twin lamellae, 69-3286
livenite, 69-2397
livine, deformafion in stone meteorites, 69-3173 ; deformation microstructures, 69-1160 ; energy for precipitation, 69-1252 ; etch-pits by acid etching, 69-2619 ; Fe-rich in rocks, petrogenesis, 69-820 ; Fe and Mg distribution, 69-3081 ; H and He ion implantation, 69-1373 ; in diamonds, X-ray, 69-3061 ; in pallasites, Al in, 69-2240 ; in peridotites, X-ray determinative curve, 69-2252 ; –orthopyroxene assemblages, Fe–Mg partitioning between, 69-2151 ; oxidation of, 69-3046 ; plastic deformation, 69-1738, 1739 ; preferred orientation by recrystallization in upper mantle, 69-1740 ; Raman spectrum, 69-3607 ; recrystallization textures, 69-2488 ; relation of cell dimensions and cation contents, X-ray, 69-501 ; six groups based on X-ray intensity ratios, 69-2253 ; spinel stability, structural basis, 69-1042 ; structure, refined by 3-dimensional least squares, 69-136 ; substitutional disorder, 69-136 ; synthetic, cell size and X-ray determinative curve, 69-3201 ; thermal diffusivity, 69-2631 ; X-ray, 69-3200 ; *Auckland,* in ultramafic nodules, chem., opt., X-ray, 69-3199 ; *Bushveld,* range in comp., X-ray, 69-737 ; *California,* from ultramafic rocks, anal., 69-3202 ; *Hawaii,* crystallization in lava, 69-2501, X-ray determinative curve, 69-2252 ; *Ireland,* in dolerite dyke, crystallization of, 69-642 ; *Italy,* in serpentinite, anal., 69-1408 ; *Japan,* in peridotites, well-cleaved, reflection ratios, X-ray, 69-2253 ; *Labrador,* in adamellite, anal., 69 1549 ; *Nigeria,* nodules in trachyte, 69-3456 ; *Ontario,* in diabase, 69-2466 ; *Oregon,* in andesite, alteration of, 69-2481 ; *Rajasthan,* in layered complex, 69-3452 ; *Sardinia,* in dyke rock, 2 transformation processes, 69-3378 ; *Siberia,* in kimberlite, surface shows dissolution, 69-685 ; *Skye,* in ultrabasic dykes, anal., opt., 69-2414, origin of translation lamellae, 69-502 ; *Sweden,* opt., 69-2411 ; *Switzerland,* anal., 69-1408 ; *Texas,* in melilite-olivine nephelinite, anal., 69-3431 ; *West Indies,* plutonic, comp., 69-3292 ; *Western Australia,* in metagabbro, anal., 69-3587
— basalt *v.* basalt, olivine
— nemafite, abandon name, replace with olivine nephelinite, 69-1543
— nephelinite, name to replace nepheline basalt and olivine nemafite, 69-1543
Oman v. Arabia
Oman mts. v. Arabia
Omphacite, chem., cell parameters, 69-1437 ; crystal-chemical characterization, 69-139 ; *Germany,* in eclogite, comp., 69-3239 ; *Italy,* 69-3240, in pyroxenite, opt., X-ray, sp.gr., 69-1436 ; *Poland,* anal., opt., 69-815 ; *South Africa,* in kyanite eclogite, anal., opt., 69-2595
Oneida Co. v. New York
Onikobe, Honshu v. Japan
Onilahy river, Tuléar v. Malagasy Republic
Onkolites, *Lake Constance,* Sr in, 69-2513
Onoratoite, *Siena,* anal., opt., 69-614
Ontario v. Canada
Oöids, precipitation, 69-2513
Ooiso hills v. Japan
Ooliths, *Germany,* in Fe ore, anal., structure, 69-1336
Opal, book, 69-1244 ; formation, 69-335 ; gem, structure from optical diffraction patterns, 69-154 ; IR determination in deep-sea sediments, 69-977 ; origin of colour, 69-335 ; pore structure, 69-834 ; porosity, 69-2528 ; surface areas, 69-3297 ; water in, 69-3297 ; X-ray, opt., E.M., d.t.a., t.g.a., d.t.g., 69-3065 ; *Argentina,* with $CaCO_3$ in stalactitic cave deposits, 69-884 ; *California,* in altered tuffs, 69-788, 2554 ; *Queensland,* localities, 69-336 ; *Western Australia,* localities, 69-1245
— -trona stalactites, 69-1204
Opaque minerals, *Pyrénées,* in ultrabasic rocks, 69-648
— ores, *Etna,* cause of ferromagnetism in lava, electron probe, 69-575
Open-cast mine design, *Quebec,* property evaluation for, 69-1356
Ophiolites, genesis, 69-2434 ; *Arabia,* genesis and emplacement, 69-3412, origin, 69-3413 ; *Italy,* 69-810, anal., petrography, 69-2434 ; *Romania,* alpine, associated metallogeneses, 69-1089 ; *Switzerland,* 69-1581 ; *western Alps,* petrography, anal., 69-2433
Opoka, porosity, 69-2528
Oppland v. Norway
Optical absorption spectra, polarized, of chloritoid, cordierite, tourmaline and vivianite, 69-846 ; of sphalerites, 69-842
— mineralogy, book, 69-1894
Optics, diffraction patterns from gem opals, 69-154 ; orientation of spheres of single crystals, 69-2744 ; refr. ind. and 2V determinative techniques, 69-2745 ; 2V determination, 69-921
Orange area v. Massachusetts
Orange Co. v. North Carolina
Orange Free State v. South Africa
Oranjemund, South-West Africa v. South Africa
Orbicular rocks, *Finland,* O isotope ratios in minerals, 69-1295 ; *India,* quartzite, 69-3443 ; *Russian SFSR,* granites, anal., 69-3444
Orciatico, Pisa v. Italy
Ore deposition, implications of irreversibility, 69-3071
— deposits, applications of thermochemistry to problems, 69-348 ; associated with resurgent cauldrons, 69-2406 ; associated with volcanic necks, 69-1097 ; epigenetic, source of metals and gangue elements, 69-1101 ; formation in self-activating zones, 69-2942 ; Ge in waters, 69-435 ; in skarns from dolomites and limestones, 69-206 ; mineral assemblages & comp. of ore-forming fluid, 69-348 ; polished sections, 69-28 ; same ages have similar comp., 69-1087 ; S as collector of metals, 69-2933 ; Se in waters, 69-434 ; W in gravimetric estimation, 69-952 ; *Brazil,* 69-2946 ; *Buenos Aires,* Fe and Ti reserves calculated, 69-202 ; *Bulgaria,* oxidation zone, sequence of deposition, 69-1541 ; *Cornwall,* exploration by geochemistry & inclusions, 69-1384 ; *Czechoslovakia,* genesis & geosynclinal magmatism, 69-253, in spilite-keratophyre, 69-250 ; *eastern Alps,* origin, 69-2937 ; *Finland,* zones related to structure, 69-1094 ; *Germany,* base metals, anal., 69-2970 ; *Greece,* 3 epochs of genesis, 69-204 ; *Hungary,* hydrothermal, petrometallogenesis, 69-1091 ; *Istanbul,* three epochs of genesis, 69-204 ; *Minas Gerais,* Ni, origin, 69-208 ; *Newfoundland,* concentric textures, 69-1134 ; *Ontario,* Ni-Co-Ag, paragenesis, 69-209 ; *Romania,* geochemistry and genesis, 69-1261 ; *Sardinia,* alteration minerals, 69-1129 ; *Siberia,* vertical variation, 69-2012 ; *Slovakia,* anal. of siderite in, 69-591 ; *Soviet Far East,* comp. of aqueous extracts from sphalerite and galena, 69-350 ; *Sudbury,* Fe-Ni-Cu, origin, 69-210 ; *Sweden,* characterization of structure, 69-2490, principles for formation of, 69-2576 ; *Tasmania,* fluid inclusions, in quartz and fluorite from, 69-2955 ; *USSR, T* classification, 69-203 ; *Utah,* U-bearing veins, 69-1118
Ore Knob mine, Ashe Co. v. North Carolina
Ore leads, *Colorado,* variation in isotopes, 69-1274
— minerals, photomicrography, 69-2748 ; *Burma,* mineralization & paragenesis, 69-2018 ; *India,* oxidized, 69-2968 ; *Oslo,* in veinlet, paragenetic sequence, 69-2973 ; *Uzbek SSR,* Pt group elements in, 69-2147
OREGON, Au in sediments on continental shelf, 69-392 ; carbonate brine anal., 69-1868 ; metagreywacke, zonation in blueschist facies, 69-1726 ; mineral stability in volcanoclastic rocks, 69-2555 ; *Canyon mt. complex,* granite, diorite, 69-2473 ; *Coastal range,* ages of rocks, 69-2717 ; *Harney Co.,* tuff, 69-3479 ; *Lake Co.,* tuff, 69-3479 ; *Lakeview,* andesite, 69-2481 ; *Mitchell,* lawsonite blueschist, 69-3594 ; *Mount Jefferson, High Cascade range,* volcanic rocks, 69-722 ; *Ritter hot springs, Grant Co.,* mesolite, 69-2685
Organic matter, *Amazon river,* 69-432 ; *Aral Sea,* in sediments, comp., 69-1311 ; *Atlantic Ocean,* in sediments, 69-394 ; *Black Sea,* in sediments, comp., 69-1311 ; *Caspian Sea,* in sediments, comp., 69-

Organic matter (*contd.*)
1311 ; *Golfe de Lion,* in sediments, 69-394 ; *Finland,* in Precambrian marble & graphite, 69-1259 ; *Pacific Ocean,* in sediments, 69-1312, 1313 ; *Rhodesia,* in Precambrian dolomite, 69-1259 ; *South Africa,* in Precambrian conglomerates & thucholite, 69-1259
Oriente v. Cuba
Orientite, cell data, proposed formula, 69-1424
Orissa v. India
Ornavassa, Novaro v. Italy
Orogeny, *Italy,* tectonics, volcanism, 69-2441 ; *New Zealand,* 69-3540 ; *Ontario,* Rb/Sr age, 69-1801 ; *Scotland,* age of Precambrian, 69-1806
Orosei, Sardinia v. Italy
Orpierre, Hautes Alpes v. France
Orpiment, free energy, enthalpy, entropy, 69-3016
Orthite *v.* allanite
Orthoclase, calc. powder patterns, 69-2757 ; electrical conductivity, 69-855, 1750 ; Fe-, Ga-, electrical conductivity, 69-855 ; *China,* phenocrysts, opt., 69-695 ; *France,* obliquity in granite, opt., X-ray, 69-3276 ; *India,* in charnockite, 69-3577 ; *Italy,* in pegmatite, anal., opt., X-ray, 69-1470
Orthopyroxene, "buffer-method" of synthesis, 69-2106 ; comp., paragenetic types, 69-1435 ; magnetic moment of Fe^{2+}, 69-858 ; -olivine assemblages, Fe–Mg partitioning between, 69-2151 ; comp., cell dimensions and site preference, 69-2272 ; *Aberdeenshire,* in cordierite rocks, anal., 69-1561 ; *Auckland,* in ultramafic nodules, opt., 69-3199 ; *Ben Nevis,* anal., 69-638 ; *Bushveld,* anal., En content from X-ray, 69-3231, range in comp., anal., 69-737 ; *California,* from harzburgite, anal., 69-3202 ; *Czechoslovakia,* in massif, anal., 69-2275 ; *Hawaii,* crystallization in lava, 69-2501 ; *India,* in anorthosite, anal., 69-3575 ; *Italy,* in serpentinite, anal., 69-1408 ; *Minnesota,* in gneiss, comp., 69-2613 ; *New South Wales,* in inclusions in basic pipes, anal., opt., 69-3428 ; *Ontario,* in diabase, 69-2466 ; *Quebec,* in Fe formation, anal., 69-2280 ; *Scotland,* coexisting with augite, anal., 69-2274 ; *South Africa,* in charnockitic rocks, 69-3571 ; *South Australia,* anal., rutile in, 69-1434 ; *Stillwater,* X-ray, 69-917 ; *Switzerland,* in serpentinite, anal., 69-1408 ; *Western Australia,* in metagabbro, anal., 69-3587
Orton, Leicestershire v. England
Oshima, Honshu v. Japan
Oslo v. Norway
Osmium, determination in rocks by neutron activation, 69-72 ; neutron activation anal., in rocks, ores and meteorites, 69-2803
Osmosa-Bozicany, Bohemia v. Czechoslovakia
Ostra v. Romania
Osumilite, compared with yagiite, 69-2392 ; *Japan,* structure, 69-2893
Otago, South Is. v. New Zealand
Otavite, synthesis, e.p.r. of Co^{2+}, 69-2078
Otero Co. v. New Mexico
Oterøy v. Norway
Otov, Bohemia v. Czechoslovakia
Otsuki-shi, Honshu v. Japan
Outer Hebrides, Inverness-shire v. Scotland
Outokumpu v. Finland
Ovardites, *Switzerland,* petrography, 69-2590
Owyhee Co. v. Idaho
Oxendon Hall, Leicestershire v. England
Oxford Co. v. Maine
Oxidation, degree of in sediments, determination, 69-3136
Oxides, structures related to fluorite type, 69-2913 ; water desorption on crystal hardness, 69-2621
Oxyapatite, 69-2371 ; synthesis of *RE*-bearing phases, 69-296
Oxygen, coefficients of diffusion between alkalic feldspars and water, 69-278 ; control of fugacities, 69-1166 ; effective charges in silicates, 69-135 ; in amphiboles, 69-3244 ; in interstellar graphite, 69-476 ; mobility in feldspars, 69-366 ; partial *P,* effect on equilibrium between Fe ores, 69-285 ; volcanic springs, isotopic comp. in water, 69-437 ; *Atlantic Ocean,* isotopic comp., 69-437 ; *Mare Tranquillitatis,* 69-2706
— isotopes, between minerals of Fe formation, 69-3088 ; comp. and ratios in sulphates, 69-418 ; decrease with granitization, 69-365 ; determinations in carbonates, 69-1382 ; in calcites, 69-3091 ; in foraminiferal tests in deep-sea cores, 69-459 ; in quartz, 69-49, 1381 ; in sulphate–water system, 69-1327 ; ratio in shell calcite as *T* indicator, 69-894 ; ratio in sulphates in various waters, 69-419 ; standards for reporting determinations, 69-1382 ; *Antarctica,* ratio in sulphates, 69-419 ; *Belgium,* in lamellibranchs, 69-1338 ; *California,* in metamorphosed carbonate rocks, 69-3137 ; *England,* ratio in baryte, 69-419 ; *Finland,* ratios in minerals from migmatite, orbicular rocks and rapakivi granite, 69-1295 ; *France,* in H_2O of crystallization of gypsum, 69-1326, in lamellibranchs, 69-1338, ratios in evaporating sea-water, 69-1350 ; *Great Barrier Reef,* of carbonate sediments, 69-1314 ; *Italy,* in lime inclusions in pillows, 69-3108 ; *Lake Baikal,* 69-437 ; *New Zealand,* palaeotemperatures on Tertiary fossils, 69-1784 ; *Quebec,* comp. altered by metamorphism, 69-2196 ; *Tasmania,* ratio in baryte, 69-419 ; *Texas,* in metamorphosed carbonate rocks, 69-3137 ; *Utah,* in carbonate rocks, 69-2149
Ozernoye, Transbaikalia v. Russian SFSR

Pacific Ocean, Hg in sediments, 69-3131 ; Mn nodules, 69-1319 ; mantle convection and sea-floor spreading, 69-897 ; Re in water, 69-3149 ; sediments, 69-1312, 1313, 3596 ; weathering of basic rocks, 69-2875 ; *Aitutaki, Cook Islands,* age of rocks, 69-17 ; *Aleutian Islands,* Ni/Co & mafic index in rocks, 69-374 ; *Austral Islands,* age of rocks, 69-17 ; *Campbell plateau,* Mn nodules, 69-391 ; *circum-Pacific province,* Th & U in volcanic rocks, 69-2165, regional metamorphism, 69-3541 ; *Cocos ridge,* basalts, 69-2485 ; *Cook Islands,* geology, 69-714 ; *East Pacific rise,* high Hg on crest, 69-3131 ; *Easter Is.,* palaeomagnetism, age, 69-862 ; *Galapagos Islands,* chemistry of lakes & bogs, 69-433 ; *Gulf of Alaska,* sea-floor spreading, 69-2700 ; *Herald Cays, Coral Sea,* drift pumice, 69-1656 ; *Juan Fernandez Is.,* palaeomagnetism, age, 69-862 ; *McCall seamount,* basalt, 69-1658 ; *Macquarie ridge,* Mn nodules, 69-391 ; *Marshall Islands,* crustal history of area, 69-1551 ; *Mururoa, Tuamotu,* age of coral atoll, 69-18 ; *New Caledoni* coexisting amphiboles, 69-3254, ferrallit 69-3008 ; *Niue Is., Cook Islands,* origin radioactivity, 69-401 ; *Pacific rise,* RE basalts, 69-1303 ; *Pitcairn Is.,* geolog 69-715 ; *Poulo Condore archipelago, Sou China Sea,* petrography, 69-1599 ; *Socie Islands,* age of rocks, 69-17 ; *off California,* sediments from cores, 6 1320 ; *S.W. of Hawaiian Islands,* vo canic rocks 69-1607 ; *Tahiti,* age of rock 69-17, petrology, 69-2406
— —, Fiji, *Vatukoula,* Au ore, 69-254 ; *Va Levu,* age of volcanic rocks, 69-7, geolog bibliography, 69-713
— —, Hawaii, crust and mantle beneat 69-1628 ; lavas, 69-2406 ; lherzoli nodule, experimental melting, 69-1217 marine clay formation, 69-1008 ; Ni/Co mafic index in rocks, 69-374 ; olivine 69-2252 ; P in lavas, 69-3103 ; radiogen He & Ar in inclusions, 69-912 ; refr. in of basalts, 69-2645 ; Th & U ana 69-387 ; xenoliths in tuffs, 69-1665 ; *Ala Kilauea, T* of lava, 69-2506 ; *Kilaue* chem. of lavas, 69-1660, crustal structur 69-1667, deep-sea basalt, 69-1658, lava 69-1663, 1965 eruption, 69-1666, spilit 69-1658, water & deuterium in pumic 69-1664 ; *Kilauea Iki,* fumarolic ga 69-1662, lava lake, 69-1661 ; *Makaopuh* lava lake, geothermometry, 69-2501 *Mauna Kea,* submarine basalts, 69-1659 *Mauna Loa,* submarine basalts, 69-1659 *Oahu,* palagonite tuff, tephra, 69-2406
Pacific rise v. Pacific Ocean
Pajarito mt., Otero Co. v. New Mexico
Pakistan, Cu, recovery as sulphat 69-215 ; exploitation of indigenous C ore, 69-215 ; mica, 69-269 ; *Mansehr Amb,* chess-board albite, 69-547
—, East Pakistan, *Bay of Bengal,* radi active minerals in beach placers, 69-20
—, West Pakistan, Mn ore, 69-232 ; *L Bela valley,* origin of sands, 69-1688 *Nowshera,* dolomitized reef, 69-2532 *Swat,* kaolinite, 69-101 ; *Zhob valle* chromite deposits, 69-2983
Palabora, Transvaal v. South Africa
Palaeoclimate, *Scotland,* during Torridonia 69-1670
Palaeoecology, *Belgian basin* and *Par basin,* 69-1338
Palaeofulgurites, *Scotland,* 69-893
Palaeogeography, and phosphorite distr bution, 69-2692 ; *Hungary,* roundness quartz grains, 69-1683
Palaeomagnetism *v.* magnetism
Palaeovolcanology, review, 69-3354
Palagonia, Sicily v. Italy
Palagonitization, *Hawaii,* rate of, 69-1659
Palamau, Bihar v. India
Palamos, Catalonia v. Spain
Palladium, determination in rocks, 69-7 2785 ; determination of traces, 69-1870 fire assay, ion-exchange, spectrochem determination, 69-2808 ; in chondrite 69-2235 ; in Fe meteorites, 69-2236 ; rocks, determination in parts-per-billio range, 69-949 ; neutron activation ana in rocks, ores and meteorites, 69-2803 *Atlantic, Pacific* and *Indian Oceans,* in M nodules, 69-1319
— minerals, *Ethiopia,* in laterites, 69-152 *Siberia,* in pentlandite ore, X-ra 69-1525
Palmi, Reggio Calabria v. Italy
Palygorskite, dimethyldioctadecyl amm nium derivatives, 69-2831 ; from dee

gorskite (*contd.*)
a, 69-2856 ; new X-ray data, 69-2832 ; ructure, 69-83 ; surface crystal chem- try, 69-1916 ; *Atlantic Ocean,* in deep diments, 69-104 ; *Uzbek SSR,* in diments, 69-2529
abula, New South Wales v. Australia
airs v. Tadzhik SSR
asqueira v. Portugal
hasa, Kashmir v. India
tellerite, *Nevada,* glass from ash-flow, nal., 69-2164 ; *New Zealand,* geochemis- y, anal., origin, 69-1308
paroa range, South Is. v. New Zealand
acharnockite, *Kola peninsula,* anal., 9-818
radox basin, Grand Co. v. Utah
ragonite, scarcity of, 69-537 ; synthesis, 9-1222 ; *India,* in muscovite, 69-2286
ramushiro Is., Soviet Far East v. Russian SFSR
raiba v. Brazil
ramagnetic minerals, magnetic moment f Fe^{2+}, 69-858
rarammelsbergite, 69-1501
ratunka river, Soviet Far East v. Russian SFSR
ravati hills, Poona v. India
rawollastonite, structure, 69-1046 ; *Japan,* X-ray discrimination from wollastonite, 69-1047
rgasite, *Malagasy Republic,* large crystals in lenses, 69-2043 ; *Uganda,* in nephelini- tic breccia, anal., 69-2496
ricutin v. Mexico
ris basin v. France
rk Co. v. Colorado
rmachenee v. Maine
rticle size analysis *v,* micrometric analysis rticle track etching, determination of U & B in water, 69-958
rwelite, *Sweden,* in ore, anal., X-ray, opt., 69-2393
sayten river v. Washington
s-de-Calais basin v. France
sso della Rossola, Adamello v. Italy
sso del Rombo, Alto Adige v. Italy
tiala v. India
tom highlands, Siberia v. Russian SFSR
tterson function *v.* crystal structure
uzhetka, Soviet Far East v. Russian SFSR
yún-Matrú volcano, Mendoza v. Argentina
ak District, Derbyshire, v. England
ak Hill goldfield v. Australia
arl, cultured, industry and marketing, 69-1248
at, conditions for U concentration in, 69-403 ; *Russian platform,* rare & tr. elements in, 69-402
at bog, *Faröes,* age of ash horizons, 69- 1808 ; *Norway,* ash horizons correlated with Icelandic eruptions, 69-1807
bble dykes, *India,* 'tuffsites' in, 69-3580; *Queensland,* formed by fluidization, 69- 255
chenga v. USSR
chora, Urals v. Russian SFSR
ctolite, *Czechoslovakia,* 69-872 ; *Georgia,* in limburgite, anal., opt., X-ray, 69- 3241 ; *Taiwan,* synthetic study, 69-1232 ; with prehnite & calcite in taiwanite, anal., 69-1232
dro Lavrada, Paraiba v. Brazil
gmatite, anal., statistics, ' false correla- tion ', 69-453 ; classification of, 69-2491 ; Pb isotopes in, origin of, 69-631 ; *Argentina,* exploitable minerals, 69-201, uraniferous, 69-1117 ; *Bavaria,* 69-3391 ; *Bohemia,* Li-bearing, zoning in, 69-674 ; *Brazil,* beryl-columbite, geochemistry, paragenesis, origin, 69-2271 ; *California,* in dykes, anal., 69-2406 ; *Colorado,* triplite in, 69-1080 ; *Connecticut,* ages 69-2715 ; *Cornwall,* alkalis & K in, 69- 3457 ; *Finland,* classification, 69-2491 ; *France,* anal., 69-3366, autunite in, 69- 869, fairfieldite, mitridatite & vivianite in, 69-869; *Germany,* micro-, formation from rhyolites, 69-2556 ; *India,* 69-3586, muscovite in, 69-2286, secretion, origin, 69-3416 ; *Italy,* in amphibolite, formation of, 69-667 ; *Kazakh SSR,* fluorite- bearing, origin, 69-2170, solutions in formation of, 69-632 ; *Korea,* with scheelite, 69-1109 ; *Malagasy Republic,* Sc in, 69-368 ; *Mozambique,* bismutite in, 69-874, mined for spodumene, 69-268 ; *Norway,* 69-3546 ; *Rajasthan,* age, distri- bution, 69-3414 ; *Rhodesia,* beryliferous, 69-2989 ; *Romania,* origin of bentonite, 69-1005 ; *Rwanda,* granitic, cassiterite in, 69-2952, many minerals in, 69-3620, with mineralized quartz veins, 69-2953 ; *Sas- katchewan,* anal., 69-1432 ; *South Africa,* age, 69-2712 ; *South Dakota,* geology, 69-719 ; *Transbaikalia,* age of Sn-bearing, 69-2736 ; *Ukrainian SSR,* inclusions in quartz, 69-1298, 1299 ; *USSR,* Rb/Sr age, 69-914, *T* & comp. of solutions forming, 69-349 ; *Virginia,* perrierite- bearing, anal., 69-1514, zoning, 69-879 ; *Western Australia,* dykes mined for muscovite, 69-270, with columbite and beryl, 69-877
Pelepah Kanan, Johore v. Malaya
Pelitic rocks, *Brazil,* low grade meta- morphic, anal., 69-2178 ; *India,* regional metamorphism of, 69-3576
Peloritani mts., Sicily v. Italy
Pench Kanhan valley, Madhya Pradesh v. India
Penfieldite, *Chile,* X-ray, anal., refr. ind., sp.gr., 69-1488 ; *Greece,* X-ray, refr. ind., sp.gr., 69-1488
Pennine orefield v. England
Pennines v. England
PENNSYLVANIA, cone-in-cone layers, 69- 2552 : diabase, 69-1556 ; *Dillsburg,* Ni/Co and mafic index in diabase-granophyre series, 69-374, tr. elements in diabase- granophyre, 69-382 ; *Gault quarry, Cor- nog,* prehnite, 69-1464 ; *Lancaster Co.,* antigorite, 69-2296 ; *Taston,* fluorescent calcite, 69-2689
Pensacola mts. v. Antarctica
Penser Weisshorn v. Switzerland
Pentahydroborite, *Siberia,* in skarn marble, H., sp.gr., refr. ind., d.t.a., X-ray, 69- 2364
Pentlandite, natural π phase, 69-1490 ; *Pyrénées,* opaque minerals in, 69-648 ; *Sudbury,* in ore body, 69-210 ; *Transvaal,* 69-2986, in gossan, 69-2982
Penzhina ridge, Soviet Far East v. Russian SFSR
Penzhinsk range, Soviet Far East v. Russian SFSR
Peperites, hypotheses for origin, 69-3480
Perevezevka v. USSR
Periclase, as substratum for spinel ferrite synthesis, 69-831 ; equation of state, 69-3589 ; equilibrium data, 69-1216 ; non-ideal crystals, X-ray, 69-146 ; shock- wave equations, 69-2626
— -spinel phase, 69-286
Peridot, gem, from Soviet Union's fund, 69-326
Peridotite, alpine, origin, 69-2499 ; alpine, serpentinization, 69-796 ; heat capacity, 69-840 ; olivines in, 69-2252 ; *Alaska,* inclusions in lava, 69-1651 ; *Arizona,* kaersutite-bearing, part of wehrlite series, 69-3432 ; *France,* xenoliths in pipes, anal., 69-3524 ; *Greece,* structure, 69- 1580 ; *Hawaii,* experimental melting of nodule, 69-1217, Th & U in, 69-387 ; *Italy,* 69-665, amphibole, 69-2435, upper mantle, 69-668 ; *Japan,* cleaved olivines in, 69- 2253, petrography, 69-2464 ; *mid-Atlantic ridge,* hydrothermal alteration, 69-864 ; *Norway,* bodies in gneiss, 69-1560 ; *Switzerland,* upper mantle origin, 69- 1408 ; *Turkey,* metamorphism of, 69- 2495
—, garnet, *Norway,* unmodified upper mantle, 69-1560
Peridotitic nodules, inclusions in, 69-1368
— rocks, *Romania,* mineralogy, 69-1439
Peristerite, X-ray, 69-1472 ; *Tyrol,* in gneiss, opt., 69-3285
Perovskite, anal., 69-954
Perrierite, *USA,* in ash beds, opt., X-ray, 69-1425
Perthite, electrical conductivity, 69-855 ; formation of, 69-3280 ; homogenization by heat, 69-1228 ; phase boundaries, 69-1052 ; *India,* in pegmatite, anal., genesis, 69-2311 ; *Italy,* in granitic rocks, chem., opt., X-ray, 69-3281 ; *Massif Central,* homogenization, 69-1229
PERU, newberyite, struvite, 69-2373 ; *Cerro de Pasco,* As-sulphides, baumhauerite, stibiodufrenoysite, 69-3349 ; *Chachani mt., Arequipa,* saltpetre, 69-1152 ; *Sechura desert,* saltpetre, 69-1152
Petalite, *Maine,* gem, 69-1246
Petrockstow basin, Devon v. England
Petrofabrics, coefficient of preferred orient- ation, derivation, 69-1616 ; *Lepontine area,* inverse pole-figures, 69-1617 ; *Swit- zerland,* of hornblende in amphibolite, 69-2489
Petrography, tests for spatial distribution of crystals in rocks, 69-1545
Petroleum *v.* oil
Petrology, significance of geological time factor, 69-1087 ; *Sweden,* anal., 69-2410
Petzite, comp., change during microanal., 69-1883 ; *Colorado,* 69-2957 ; *Western Australia,* 69-261
Peyresourde, Hautes Pyrénées v. France
pH, determination of quartz suspensions, 69-925 ; of equilibrium, between aqueous solutions & rocks & minerals, 69-451 ; of mineralizing solutions, 69-632
Pharmacolite, crystallography, 69-2924 ; discrepancies in identification, 69-1783
Phase equilibria, glass & gel starting materials for studies, 69-2045
Phenakite, Raman spectrum, 69-3607 ; removal of fluorite from, 69-1863 ; *USSR,* in metasomatites, 69-1139 ; *Virginia,* in Sn deposits, 69-2145
Phengite, hydroxyl absorption bands, IR, 69-2825 ; Si ions in, 69-1451, 1452 ; *Italian Alps,* variation in comp., opt., X-ray, 69-533 ; *Italy,* chromian, in ankerite marble, anal., opt., 69-2290 ; *Poland,* anal., opt., 69-815 ; *Swiss Alps,* variation in comp., opt., X-ray, 69-533
Phenocrysts, *Iceland,* sorting in basaltic sheets, 69-1620
Phichit v. Thailand
Phillipsite, *California,* in altered tuffs, 69-788 ; in tuffaceous rocks, 69-2319 ; *Italy,* in geode in tuff, 69-3388
Phillips mine, Boulder Co. v. Colorado
Phlegraean Fields, Naples v. Italy
Phlogopite, B indicator in Mg skarns,

Phlogopite (*contd.*)
69-3084 ; dehydration *T*, 69-2132 ; dehydroxylation, rehydroxylation, oxidation, reduction, IR, 69-3053 ; opt. absorption spectra, structure, colour, pleochroism, 69-1952 ; 2 stages of decrepitation, 69-1449 ; *Canada,* anal., age, XRF, X-ray, opt., sp.gr., d.t.a., t.g.a., magnetic susceptibilities, polymorphism, paragenesis, 69-532 ; *Malagasy Republic,* 69-1154, small deposits, 69-2043, worked deposit, 69-2042 ; *New Jersey,* Mn, anal., 69-3271 ; *New South Wales,* in inclusions in basic pipes, anal., opt., 69-3428 ; *Russian SFSR,* converted to vermiculite-sunglite, 69-536 ; *Siberia,* metasomatic, anal., 69-794 ; *Sweden,* Ba-rich, anal., opt., 69-2289, opt., 69-2411 ; *Ukrainian SSR,* in anthophyllite-cordierite rocks, 69-521
Phonolite, monograph on, 69-1153 ; Sr & Ba in phenocrysts & groundmass, 69-2153 ; *Antarctica,* petrology, anal., 69-712 ; *France,* in massif, magnetism, 69-3367 ; *Italy,* haüyne & analcite, petrography, 69-2437 ; *Malagasy Republic,* genesis, 69-2449 ; *Morocco,* age, 69-2711 ; *Polynesia,* age, 69-17 ; *Sardinia,* alteration products, X-ray, anal., 69-1691 ; *Siberia,* Nb & Ta distribution, 69-379 ; *Sudan,* 69-3404 ; *Texas,* analcite, anal., 69-3431 ; *Vietnam,* haüyne, anal., 69-694
Phonolitic rocks, *Bohemia,* anal., norms, 69-2446
Phoscorite, *Transvaal,* anal., 69-2346
Phosgenite, *Leicestershire,* in ore, 69-2665
Phosphate deposits, *Florida,* source, 69-2369 ; *Sicily,* anal., 69-274 ; *Utah,* Al, Sc in, 69-600
— minerals, IR, 69-2638, 2923
— nodules, *Texas,* in clay, anal., comp., 69-3510
— rocks, carbonate-bearing minerals in, 69-35 ; possible radiation hazard, U, Ra & Th in, 69-889 ; rapid determination of phosphate in, 69-1864 ; U as by-product of processing, 69-220 ; *California,* occurrences, 69-2542 ; *Poland,* chem., mineralogy, 69-1686
Phosphates, alkaline earth, basic solution precipitation, 69-2086 ; as refractory bonds, 69-3037 ; anal., X-ray, 69-3338 ; flotation, 69-3000 ; rapid determination in natural water, 69-1850 ; rapid determination in phosphatic rocks, 69-1864 ; *Rwanda,* rare types, 69-3620 ; *USA,* sand in continental shelf, X-ray, 69-2551
Phosphorite, formation, book, 69-2822 ; palaeogeographic distribution, 69-2692 ; rare earths in, 69-1147 ; *Iowa,* 69-1148 ; *Montana,* Precambrian, anal., 69-1146 ; *Poland,* anal., d.t.a., t.g.a., X-ray, 69-1686
Phosphorus, concentrated in tree tissue, 69-2222 ; indicator of basalt crystallization, 69-3103 ; in silicate rocks, 69-1379 ; in standard rocks, 69-1379 ; *Black Sea,* in Fe-Mn concretions, 69-3134 ; *Germany,* in oolitic Fe ore, 69-1336 ; *Hawaii,* in lavas, 69-3103 ; *Mediterranean,* removal from forest litter, 69-2195 ; *Rhum,* in basic layered intrusion, 69-362 ; *Russian SFSR,* origin of, in svanbergite, 69-597 ; *Siberia,* in mafic extrusive rocks, 69-363 ; *Skaergaard,* in basic layered intrusion, 69-362 ; *Vietnam,* enrichment of microgranite by guano, 69-364
— compounds, pyrophosphate, effect on Ca_3PO_4 crystallization, 69-2087
Phosphuranylite, *France,* 69-2979
Photomicrography, of ore minerals, 69-2748
Phyllite, definition of term, 69-2573 ; *Argyllshire,* anal., chem. of pyrometamorphism, 69-2564 ; *French Guiana,* origin of micaceous, 69-1933 ; *Ghana,* kaolinized, d.t.a., t.g.a., X-ray, grain size, EM, 69-1015 ; *Italian Alps,* 69-808 ; *Italy,* 69-3560, petrography, 69-2440, quartz-, petrography, 69-2264 ; *S. W. England,* ages, 69-3547 ; *Switzerland,* petrography, 69-2590
Phyllonite, *North Carolina,* petrography, anal., origin, 69-1342 ; *Queensland,* 69-1106
Phyllosilicates, polytypism, 69-1921
Piacenza v. Italy
Pianura, Phlegraean Fields v. Italy
Picco d'Ivigna, Alto Adige v. Italy
Pickeringite, *Lipari Is.,* in altered volcanic rocks, 69-1678
Picrite, *Virginia,* Th and U in, 69-2166
Piémont v. Italy
Piemonte v. Italy
Piedmontite, *Massachusetts,* gem, 69-1246
Pierrefitte, Haute Pyrénées v. France
Pierre-qui-Vire, Yonne-Nièvre v. France
'Pietra verde', *Italy,* genesis, 69-3277
Pigeonite, twinning in, 69-3238 ; *Bushveld,* anal., trend in magma, 69-3232 ; *India,* in ankaramite, opt., 69-3235 ; *Ontario,* in diabase sill, 69-2466 ; *Sicily,* in tholeiitic basalts, comp., opt., 69-2426 ; *South Africa,* in charnockitic adamellite porphyry, 69-3570
Pilbara, Western Australia v. Australia
Pillow lava, synthesis of data, formation of, 69-629 ; *Carlsberg ridge,* basalt, anal., metamorphism of, 69-2451 ; *France,* part of sub-aerial sheet, 69-3368 ; *Germany,* 69-2444 ; *Iceland,* degassing produces tuff, 69-1653 ; *India,* tectonic significance, 69-3579 ; *Italy,* 69-3560, diabasic, lime inclusions in, 69-3108 ; *Kurile Is.,* andesitic-basalt, anal. of core, shell and matrix, 69-2492 ; *North Carolina,* 69-1613 ; *Sardinia,* fluviatile and marine, 69-2432 ; *Switzerland,* 3 types, 69-3371 ; *Tasmania,* spilitic, origin, 69-3427 ; *western Alps,* petrography, anal., 69-2433
Pilot Knob v. Missouri
Pine Point, Northwest Territories v. Canada
Pinnoite, structure, 69-193
Pinto v. Spain
Pinyok mine v. Thailand
Pioneer mine, New South Wales v. Australia
Pirgo, Sicily v. Italy
Pirssonite, *California,* structure, 69-177
Pisa v. Italy
Písek v. Czechoslovakia
Pitcairn Is. v. Pacific Ocean
Pitchblende, Ar, He, Kr, Xe in, 69-1372 ; associated with halloysite, 69-2862 ; oxidation rates of U isotopes, 69-1271 ; *Czechoslovakia,* 69-2385 ; *France,* 69-2979 ; *Germany,* age, 69-908, in fluorite vein deposits, 69-221 ; *India,* 69-2981
Pitten v. Austria
Plagioclase, An content for magmatite classification, 69-2401 ; and coexisting amphibole, Ca between, 69-3082 ; basic, comp. and thermal state, 69-1475 ; calc. powder patterns, 69-1836 ; coexisting in plutonic & metamorphic rocks, An content, 69-1548 ; differential solution in supercritical water, 69-2122 ; dissociation in chloride solutions, 69-2123 ; energy for ion clustering in, 69-1989 ; from dissociation of epidote, 69-1206 ; glass fusion, method improved, 69-918 ; high determinative chart, 69-2315 ; hydrothermal reactions with chloride solutions, 69-2123 ; in anorthositic rocks, comdisorder and sp.gr., 69-2312 ; in basorder-disorder relationship, 69-staining of, 69-1834 ; variation of reflection, 69-1231 ; *Austrian Alps,* pdeformation crystallization, 69-8*Bushveld,* in anorthosite, opt., X-r69-1474, range in comp., X-ray, 69-7*California,* zoning in phenocrysts, 69-6*Caucasus,* zoned porphyroblasts xenoliths, 69-3396 ; *India,* in anorthosanal., 69-3575 ; *Italy,* high *T*, in 'pverde', opt., 69-3277, in apatite, 69-3in porphyrite, twinning, 69-2316, syenites, opt., 69-3384 ; *Ivrea zone,* gabbroic rocks, twinning, 69-328*Labrador,* in anorthosite, opt., X-r69-1474 ; *New York,* in anorthosite, oX-ray, 69-1474 ; *New Zealand,* in gneopt., physical data, 69-824, in rhyolitcrystallization, 69-708, in volcanic roctr. element anal., 69-3083 ; *Nigeria,* basalt, deep crustal, comp., 69-328*Norway,* in anorthosite, opt., X-r69-1474 ; *Ontario,* phenocrysts in mevolcanic rocks, comp., 69-3287 ; *RussSFSR,* in orbicular granite, opt., 69-344*Skye,* in ultrabasic dykes, comp., zon69-2414 ; *South Africa,* in charnockrocks, 69-3571 ; *Stillwater,* in anorthosopt., X-ray, 69-1474 ; *Switzerland,* amphibolites, An content, 69-356*Tasmania,* in granite, alteration, 69-128*Tyrol,* peristerite, in gneiss, opt., 69-328*USA,* in basalts, indicates contaminat69-2498 ; *Wyoming,* calcic, coexistwith sanidine in volcanics, 69-3430
Plagionite, diagnostic features, 69-333same formula as tintinaite, 69-2386
Planchéite, Cu amphibole formula, 69-144structural formula as amphibole 69-32
Plan de la Tour, Var v. France
Planets, origin of, condensation of, 69-47weathering products and mineral stabilat surface of Mars, 69-2708
Planèze, Cantal v. France
Plastic flow, of halite crystals influenced electric field, 69-3611
Plateau de la Défense v. France
Platinum, determination in rocks, 69-2785 ; determination of traces, 69-187fire-assay, ion-exchange, spectrochedetermination, 69-2808 ; neutron activation anal. in rocks, ores and meteorit69-2803 ; *Uzbek SSR,* Pt group elemin ores, 69-2147 ; *Wyoming,* in mwaste, 69-2962
— minerals, *Ethopia,* in laterites, 69-152*Stillwater,* in ultramafic zone, 69-2349
Playfairite, *Ontario,* new mineral, X-rsp.gr., VHN, 69-2384
Pleochroism, caused by ferrous-ferric eltronic interaction, 69-846 ; in chlorisheet silicates, phlogopite & vivian69-1952
Pleochroite, comp., structure, opt., anX-ray, 69-289
Plombierite, *Austria,* in basanite, 69-36
Plumbojarosite, *Transbaikal,* from decoposition of tourmaline, 69-511
Plutonic rocks, An content of coexistplagioclases, 69-1548 ; by recrystallizatof volcanics, 69-3454 ; *Canary Islan*preliminary investigation, review literature, 69-663 ; *Tahiti,* anal., 69-240*Uzbek SSR,* in complex with volcan69-689

onism, *Alaska,* age of batholith, 1-1812 ; *Montana,* 63-2406
ons, layering in, 69-630 ; *Czechoslovakia,* ge, 69-2721 ; *Germany,* tectonic anal., 5-735 ; *Nevada,* age, 69-1811 ; *Siberia,* rigin by replacement, 69-2459 ; *Trans-ikalia,* alaskite granite & granophyre, ineralization, ages, 69-2737 ; *Washing-n,* petrology, age & emplacement, 9-2718
umoconiosis, *South Africa,* in chromite iners, 69-888
lsol, *France,* Cu & organic matter in, 9-1332
lsolization, 69-1328 ; experiments with ntigorite serpentinite, 69-317 ; *Scandin-ia,* 69-1939
ggio Ferrante, Sardinia v. Italy
ison ridge, Rabbit Ears range v. Colorado
khri, Garhwal v. India
LAND, clays, clay minerals, 69-989 ; evaporites, 69-3497 ; S deposits, 69-2992 ; S from gypsum, epigenetic limestone, 39-2991 ; *Chalupki,* francolite, phosphate rock, phosphorite, 69-1686 ; *Grabiszyce,* granodiorite gneiss, 69-751 ; *Hĕrmano-vice, Silesia,* thuringite in veinlets, 69-539 ; *Jordanów, Silesia,* chromian hydrogrossular, 69-2263 ; *Jurkowice, nr. Klimontow,* bentonite in dolomite, 69-1006 ; *Karkonosze,* structures & textures of Fe ores, 69-574, tectonics affecting granite, 69-734 ; *Kletna, Sudeten,* boh-danowiczyte, 69-1529 ; *Lésna,* grano-diorite gneiss, 69-751 ; *Lublin,* heavy minerals, 69-775 ; *Miedzianka,* sandbergite, 69-568 ; *Nowa Ruda,* argillite & bauxite, 69-1331 ; *Śnieżnik mts., Sudeten mts.,* eclogites, 69-815 ; *Sowie Góry, Sudeten mts.,* gneisses, 69-675 ; *Zareby,* tuff, 69-1584 ; *Zawidów,* granodiorite, 69-751
olariscope, bench, rotating stone table for, 69-1249
olarographic analysis, 69-976
olarity, identification in tetrahedral AB compounds, 69-132
olianite, *France,* 69-2985
olished sections, grids for field location, 69-920
olk Co. v. Florida
ollucite, thermal expansion data, X-ray, 69-1745 ; *Ontario,* 69-1773
olonium isotopes, ^{210}Po, removal from Ra standards, 69-1849
olycyclic aromatics, geochemistry in soils, sediments & sedimentary rocks, 69-400
olydymite, *Czechoslovakia,* anal., 69-2385
olyethylene, epitaxy on quartz, 69-1953
olyhalite, *Turkey,* Recent, 69-1768
olymorphism, of wollastonite, 69-2891 ; structural model for mica, 69-2901
olytypism, in Zn sulphide crystals, 69-166 ; structural model for mica, 69-2901
ontgibaud, Massif Central v. France
oona v. India
ope Co., v. Illinois
op-Ivan–Tulghes v. Romania
orcupine, Ontario v. Canada
orosity, of diatomite, opal., opoka, tripolite, 69-2528 ; methods of study, 69-2528 ; spectra of scaly minerals, 69-2754 ; *Atlantic Ocean,* of sediments from cores, 69-3596 ; *Pacific Ocean,* of sediments from cores, 69-3596 ; *Tadzhik SSR,* in epigenetic zones of Cretaceous rocks, 69-2560
orphyrins, geochemistry in soils, sediments and sedimentary rocks, 69-400 ; in oil & sediments, 69-3080
Porphyrite, *Italy,* granophyric, 2 crystallization phases, 69-2442 ; *Lake District,* 69-2415 ; *Switzerland,* pyroxene, magnetization of, 69-3609
Porphyrization, *USSR,* 69-3566
Porphyroblasts, *Honshu,* K-feldspar in gneiss, opt., structure, 69-3282 ; *India,* relation to fabric in gneisses, 69-3441
Porphyroids, *France,* originally ignimbrites, 69-3369 ; *Italy,* petrography, 69-2440 ; *Massif Central,* ignimbrite characteristics, 69-3369 ; *Normandy,* ignimbrite characteristics, 69-3369
Porphyry, weathered labradorite-augite, anal., 69-1929 ; *Alaska,* Cu in, 69-2948 ; *Bihar,* xenolithic, origin, 69-3466 ; *Brazil,* in subvolcanic complex, 69-727 ; *Colorado,* age, 69-2714 ; *Cornwall,* quartz-feldspar, petrography, anal., origin, 69-1564 ; *Pamirs,* fergusonite-, anal., of eclogite from pipe, 69-3568 ; *South Africa,* charnockitic adamellite, 69-3534, 3570 ; *Sweden,* quartz-, 69-2575, quartz-, pyroclastic flow, 69-2030 ; *Urals,* origin by metamorphism of andesites, 69-2566
—, diabase, *Armenian SSR,* banding in dykes, anal., 69-3447
— -porphyrite series, *Vosges,* anal., 69-2423
Port Hedland, Western Australia v. Australia
Porthleven v. Cornwall
Portlandite, thermal decomposition, X-ray, 69-2066
PORTUGAL, *Algares de Portel, Evora,* sulphides in borehole, 69-2971 ; *Aljustrel,* past & present mining, 69-1116 ; *Bas-Alentejo,* age of charcoal, 69-2729 ; *Bicesse-Casal do Clérigo,* rhyolite, 69-658 ; *Panasqueira,* W-Sn mineralization, 69-2011 ; *Santa Comba Dão, Viseu,* cordierite, 69-3225 ; *Tras-os-Montes,* tectonic breccia, 69-2582 ; *Vale da Ermida,* W-Sn mineralization, 69-2011
Potash, *New Mexico,* 69-2537
— deposits, *Belorussian SSR,* mining details, 69-2038
Potassium, anal. by γ-ray spectrometry, 69-956 ; determination, 69-57 ; determination in cement by atomic absorption, 69-1876 ; determination by mobile γ-ray spectrometer, 69-2813 ; determination in standard rocks by XRF, 69-1880 ; differentiation in upper mantle, 69-1251 ; in beryl, 69-1432 ; in feldspars, flame photometric determination, 69-943 ; in igneous rocks, by γ-spectrometry, 69-388 ; in synthetic tourmaline, 69-340 ; rapid determination by atomic absorption, 69-1874 ; removal from depths to outer layers of earth, 69-1157 ; *Alps,* K/Rb in biotites and rocks, 69-3270 ; *America,* in rivers and marine sediments, 69-1354 ; *Arizona,* in volcanic rocks, 69-2406 ; *Chile,* in cryptomelane, 69-1512 ; *Colorado,* in soils, 69-3129 ; *Cornwall,* in granites, 69-359, in pegmatite relative to aplite, 69-3457 ; *Devon,* in granites, 69-359 ; *France,* from borehole, stratigraphical profile, 69-1317 ; rate of leaching in rocks, 69-1329 ; *Haiti,* in spherulitic andesite, 69-2167 ; *Italy,* anal., of K/Rb in metamorphic sequence, 69-3142, in rocks, geochemistry during weathering, 69-1293 ; *Ivory Coast,* rate of leaching in rocks, 69-1329 ; *Mediterranean,* removal from forest litter, 69-2195; *New Zealand,* in andesites and depth of seismicity, 69-1657, in plagioclases, 69-3083 ; *Nigeria,* in granite, 69-380 ; *North Carolina,* in ultramafic rocks, 69-3100 ; *Sardinia,* in biotite, 69-1457 ; *South-West Africa,* in granites, 69-1636 ; *Tuscany,* in biotite & sandine, 69-2291 ; *Ukrainian SSR,* in waters of evaporite beds, 69-2209 ; *Uzbek SSR,* in sediments, 69-2529
— compounds, bichromate, structure, 69-1972 ; $KAlSi_3O_8$-glass, high-*T* thermodynamic properties, 69-1167 ; KCl, single crystal growth, 69-3029 ; $KHSi_2O_5$, synthesis, 69-3039 ; KSO_4^-, dissociation constants, 69-299 ; screw dislocations of chloride whiskers, 69-1030 ; *New Zealand,* K_2O/Na_2O in basic igneous rocks, 69-358 ; *USA,* K_2O contamination indicator in basalts, 69-2498 ; *Stassfurt,* reworking of, 69-3521
Potenza v. Italy
Potosi v. Bolivia
Pottery, thermoluminescent dating, 69-22
Potts Ghyll, Cumberland v. England
Poughite, synthetic, anal., 69-620 ; *Honduras,* 69-620 ; *Mexico,* H., sp.gr., X-ray, 69-620
Poulo Condore archipelago, South China Sea v. Pacific Ocean
Powder River basin v. Wyoming
Powders, density measurements, 69-26 ; grading by X-ray diffraction intensity, 69-32
Powellite, structure, 69-2926 ;
— -scheelite crystals, synthesis, goniometric study, 69-287
Praa Sands, Cornwall v. England
Prague v. Czechoslovakia
Prase, *Western Australia,* localities, 69-1245
Praseodymium, in rhabdophane, 69-3343 ; *New Zealand,* in stream sediments, 69-397
Prasinite, *Italian Alps,* petrography, genesis, anal., 69-1711 ; *Italy,* compared chemically with amphibolites, origin, 69-1343 ; *Switzerland,* petrography, 69-2590
Precambrian, classification review, 69-3538 ; worldwide correlation of subdivisions, 69-1806 ; *Brazil,* 69-2946 ; *India,* structure and tectonics, 69-3585 ; *Rhodesia,* regional metamorphism, 69-3572 ; *Scotland,* ages & subdivisions, 69-1806
Precipitation, of aragonite fabrics, 69-2513 ; of silicates in nature, calculation, 69-1252
Predazzite marble, *Italy,* formation of, 69-3389
Predazzo v. Italy
Predosa v. Italy
Prehnite, B isomorphism in, 69-3084 ; *Colorado,* in biotite in batholith & intruded rocks, 69-2305 ; *Cornwall,* in gabbro, 69-2666 ; *New South Wales,* in metamorphosed, volcanic greywackes, 69-779 ; *Norway,* with biotite & graphite, origin, 69-3275 ; *Pennsylvania,* doubly terminated, 69-1464 ; *Siberia,* from gabbro-dolerite, anal., opt., sp.gr., 69-2304
Preluca massif, Transylvania v. Romania
Premier mine, Transvaal v. South Africa
Preobrazhenskite, opt., X-ray, pseudo-uniaxial, 69-2362
Pressure, high, effects on basaltic rock, 69-630 ; of oxygen, on crystallization of basaltic magmas, 69-630 ; of water, on crystallization of basaltic magma, 69-630
— vessels, two design improvements, 69-2997
Příbram v. Czechoslovakia
Prindle volcano, Yukon-Tanana Upland v. Alaska
Probertite, stability field, 69-2094

Proportionscope, for diamond grading, 69-329
Prospect, New South Wales v. Australia
Prospecting *v.* exploration
Proustite, structure, 69-167 ; synthesis, 69-293
Providence Co. v. Rhode Is.
Providencia mine, Léon v. Spain
Pseudobrookite, *New Zealand,* in ironsand, 69-283, 284 ; *Spain,* in soils, source of, 69-578
Pseudo-chlorite, *Atlantic Ocean,* from microfaunal tests, 69-538
Pseudocrocidolite, 69-334
Pseudo-greisen, term deplored, 69-3353
Pseudoleucite, *Kirgizian SSR,* origin in syenite, 69-3455 ; *Siberia,* in alkalic pluton, comp., origin, 69-2456, origin in fenite, 69-3455
— rocks, *Siberia,* anal., opt., 69-3400
Pseudomalachite, *Angola,* X-ray, 69-873
Pseudomorphs, calcite & fluorite after baryte, 69-2356 ; *Maine,* muscovite after staurolite, 69-826
Pseudo-xenoliths, *Crimean mts.*, 69-2494
Puchegg, Styria v. Austria
Puerto Rico v. West Indies
Puglia v. Italy
Püllersreuth, Bavaria v. Germany
Pumice, *Chile,* in ignimbrite, anal., 69-1615 ; *Coral Sea,* drift, petrography, anal., origin, 69-1656 ; *Kilauea,* water & deuterium in, 69-1664
Pumpellyite, anorthite from, 69-1213 ; diopside from, 69-1213 ; hydrogrossular from, 69-1213 ; synthesis, 69-1213 ; *California,* metamorphic zone mineral in metagreywacke, 69-1726, replacement in retrograded glaucophane schist, 69-1725 ; *Carpathians,* described as new mineral, lotrite, 69-1715 ; *Czechoslovakia,* in veins in breccias, anal., X-ray, d.t.a., opt., 69-509 ; *Iceland,* in geothermal drill holes, 69-2211 ; *Lesser Caucasus,* in syenites, anal., opt., d.t.a., X-ray, 69-3220 ; *New South Wales,* in metamorphosed, volcanic greywackes, 69-779, in teschenites & syenites, origin, 69-2265 ; *Oregon,* metamorphic zone mineral in metagreywacke, 69-1726
Punched cards, for geochemical data, 69-42
Punjab v. India
Punta-Jolanda, Gressoney-Piemonte v. Italy
Puralia, Bihar v. India
Purgatoire valley v. Colorado
Puy-de-Dôme v. France
P'yanka-Lomovskoye, Urals v. Russian SFSR
Pycnite, colour due to Co, 69-3216
Pyhäsalmi v. Finland
Pyrargyrite, structure, 69-167 ; synthesis, 69-293
Pyrénées-Orientales v. France
Pyrite, as scavenger of base metals, 69-291 ; decomposition curve, 69-3018 ; Eh & pH of equilibrium, 69-451 ; Fe Mössbauer spectra, 69-859 ; geochemistry of, anal., genesis, book, 69-1264 ; in fluorite, 69-2381 ; leaching of, 69-2999 ; spark source mass spectrography, tr. elements, origin, 69-561 ; oxidation studied during development, 69-2746 ; structural stability, 69-1957 ; *Baltic Sea,* spherules in sediments, 69-1668 ; *Bihar,* octahedral, significance of, 69-3321 ; *Brazil,* 69-2003 ; *Canada,* anal., 69-1499, nodules in Cu-Ni ore deposit, 69-1131 ; *Carpathians,* types of occurrences, 69-1264 ; *Chile,* Cu-zoning in, 69-3322 ; *Czechoslovakia,* collomorphic, 69-247, geochemistry of, 69-1264, H., 69-833, Cu, Co, Ni, Zn, in, 69-2144, X-ray goniometry, H., 69-249 ; *Finland,* in sandstone & conglomerate blocks, anal., 69-1669 ; *France,* 69-2979 ; *Germany,* in metamorphic aureole, 69-3526 ; *Gulf of Bothnia,* concretions, anal., 69-1669 ; *India,* 69-2968 , 2981, minor elements in, 69-2024, 3087 ; *Moldavian SSR,* S isotopes in, 69-2197 ; *Newfoundland,* framboidal, 69-1134 ; *New South Wales,* in Bi-Mo ores, 69-225 ; *Orange Free State,* radioactive corrosion in, 69-3438 ; *Portugal,* in borehole, 69-2971 ; *Russian SFSR* Au content as skarn evaluator, 69-1024, in septarian nodules, 69-1322 ; *Slovakia,* in polymetallic deposit, 69-563 ; *Sudbury,* in ore body, 69-210 ; *Switzerland,* in dolomite, sedimentary, 69-1272 ; *Taiwan,* Cu in, 69-3323 ; *Ukrainian SSR,* with coal, distribution & comp., 69-1340 ; *USSR,* Re & Mo content, 69-405 ; *Uzbek SSR,* Pt group elements in, 69-2147 ; *Witwatersrand,* origin, 69-2933 ; *Yorkshire,* from shales, tr. elements in, 69-3112
— ore, *Russian SFSR,* porosity and density of bodies, 69-1743, replacement deposits, 69-1743 ; *Siberia,* 69-2000 ; *Urals,* deposit evaluation, 69-1999
— polymetallic ores, *Czechoslovakia,* anal. of main minerals, 69-246, genesis, 69-251, relationships to Fe ore, 69-250, structure and texture of minerals, 69-249
Pyroaurite, structure, 69-1061
Pyrobelonite, structure, 69-1085
Pyrochlore, *Nigeria,* in rare-metal apogranite, anal., 69-2378 ; *Quebec,* anal., crystallography, 69-2379 ; *USSR,* in rare-metal apogranite, anal., 69-2378
Pyroclastic rocks, classification, 69-3355 ; *Antarctica,* 69-3478 ; *Atlantic Ocean,* age, 69-2508 ; *Italy,* Rb and K in, 69-1293 ; *Japan,* tephrochronological studies, 69-1655 ; *Lipari Is.,* diagenesis, 69-3518 ; *Norway,* sulphide deposits in, 69-1093 ; *Spain,* gneiss, 69-812, origin of sulphides in, 69-2001 ; *Sweden,* quartz porphyry, 69-2030 ; *Trentino,* anal., 69-3387
Pyrolusite, equilibrium with rhodochrosite, 69-3031 ; shock-wave equations, 69-2626 ; *Italy,* diagenetic, 69-3520
— -polianite, *Guiana shield,* 69-230
Pyromorphite, group structure, 69-1078 ; IR, 69-1078 ; *Cumberland,* 2 phases in, 69-604 ; *Leicestershire,* in ore, 69-2665
Pyrope, opt. absorption spectra, 69-2643 ; *Russian SFSR,* 69-272 ; *Scotland,* in agglomerate, anal., 69-1415 ; *Siberia,* in kimberlite, surface shows dissolution, 69-685
Pyrophyllite, hydrothermal alteration in NaOH solution, 69-2134 ; structure, 69-2901, 2902 ; *Alaska,* in conglomerate, 69-1448 ; *England,* in Chalk, 69-109 ; *Europe,* in Chalk, 69-109 ; *Morocco,* 69-1769 ; *Sahara,* occurrence and origin, 69-1004
Pyrosmalite, *Kazakh SSR,* structure, 69-1987
Pyrostilpnite, *Germany,* structure, 69-1958
Pyroxenes, anal., B in, 69-1438 ; chem., cell parameters, 69-1437 ; deformation of in stone meteorites, 69-3173 ; diopside–hedenbergite solid solutions, synthetic, cell parameters of, 69-3230 ; Fe and Mg distribution, 69-3081 ; Fe-Mg in coexisting garnet and, 69-2154 ; in diamond pipes, anal., 69-1648 ; in diopside–hedenbergite–acmite system, 69-227 isomorphous substitution in alumino 69-1221 ; metamorphic, comp., pa genetic types, 69-1435 ; model for Fe- partitioning between ortho- and clin 69-2151 ; programme for subdivision I.B.M. 1620, 69-936 ; *Andhra Prade* coexisting in charnockitic rocks, 69-32 coexisting in charnockites, Ti in, 69-32 in charnockitic rocks, orthopyroxe clinopyroxene pairs, anal., 69-323 *Arizona,* in eclogite inclusions, an 69-3590 ; *Bushveld,* anal., trends, 3232 ; *California,* jadeitic, in greywac anal., opt., sp.gr., 69-2278, jadeitic, schist, anal., opt., age, 69-3284 ; *Ind* coexisting in charnockites, chemist 69-3237, exsolution lamellae, anal., X-r 69-516, green, 69-823 ; *Inverness-sh* in metamorphosed syenite, an 69-1708 ; *Ireland,* in dolerite dyke, com crystallization of, 69-642 ; *Kamchat* in basalts, comp., opt., 69-515 ; *Onta* in diabase, 69-2466 ; *Pamirs,* in eclog xenoliths, opt., 69-3568 ; *Romania,* re ind., anal., 69-1439 ; *Sea of Japan,* glass, opt., 69-2460 ; *Siberia,* in eclogit comp., 69-1649 ; *Sweden,* opt., 69-241
—, *v. also* clinopyroxene; orthopyroxene
Pyroxenite, Fe, Ti and V correlati 69-369 ; *Azerbaijan,* geochemistry of and Co, 69-373 ; *Bushveld,* mineralo modal, grain-size and sorting an 69-737 ; *California,* clino-, anal., 3202 ; *Donegal,* on margins of dole dyke, 69-643 ; *Italy,* 69-665, an 69-3382 ; *Nigeria,* inclusions in trachy 69-3456 ; *Spain,* anal., 69-1572
—, hornblende, *Rajasthan,* anal., 69-693
Pyroxmangite, opt. absorption spectru 69-1985 ; *Italy,* 69-1127
Pyrrhotite, compared with troilite, 3325 ; in system Fe–S–O, 69-30 lattice parameters and superstructu 69-2091 ; leaching of, 69-2999 ; melt curve, 69-3018 ; range in comp. structure, X-ray, 69-1500 ; *Arizo* 69-2980 ; *Brazil,* 69-2003 ; *Canada,* l Fe polymorphs, structure, 69-1059, t ture, 69-1603 ; *England,* cause of magn ism, 69-866 ; *France,* conditions deposition, anal., 69-2965 ; *Germany,* metamorphic aureole, 69-3526, low polymorphs, structure, 69-1059 ; *Zealand,* in gneiss, opt., physical da 69-824 ; *Portugal,* in borehole, 69-297 *Pyrenees,* in limestone from, sk mineralization, 69-2010 ; *Romania,* l Fe polymorphs, structure 69-105 *Siberian platform,* in Cu-Ni ores, 69-3595 ; *South Africa,* myrmekitic int growth with gold and linnaeite, 69-113 *Sudbury,* in Fe-Ni-Cu ore body, 69-21 *Transvaal,* 69-2986, in gossan, 69-298 *Virginia,* in pegmatite, 69-879

Quadrate, Trentino v. Italy
Quartz, 69-1465 ; Brazil-twin boundar opt., 69-3602 ; cell parameters and elements in different genetic typ 69-1466 ; compressibility versus *T*, 1468 ; –corundum stability, 69-21 determination of pH and Eh of susp sions, 69-925 ; effect of twin bounda on growth, 69-3601 ; elasticity consta 69-2627 ; electrical conductivity, 69-26 3613 ; electrical conductivity in alternat field, 69-2649 ; electrokinetic potent 69-836 ; epitaxy of polyethylene

rtz (*contd.*)
)-1953 ; gases in, 69-3295 ; gases in
nclusions, 69-1367 ; high-low inversion,
9-1468 ; hydrothermal, formation *T*,
9-1381 ; mineral powder in, 69-3531 ;
on-transparent, refr. ind. determination,
ispersion curve, absorption coefficient,
9-558 ; O isotopes in, 69-49 ; opt.
homogeneities in, 69-2307 ; point pit
tching in, 69-2618 ; proportion in
yrmekite, micrometric anal., 69-544 ;
elation of growing crystals with
bstacles, 69-1199 ; scaling laws, 69-
468 ; smoky, HCl and SO_2 cause
mokiness, 69-3295 ; smoky tint in
rradiated, 69-2998 ; surface layers pro-
luced on grinding, 69-836 ; surface state,
39-3033 ; synthetic, activation energy of
formation of smoky centres in Al-
ontaining, 69-2998 ; synthetic, artificial
twinning in, 69-2617 ; synthetic, etch
patterns and structure, 69-829 ; synthetic
inclusions in, 69-2099 ; transition to
coesite, 69-1224 ; undulatory extinction
range, 69-1467 ; X-ray anal. in mixtures,
69-39 ; X-ray, 'umweganregung' spots,
69-2881 ; zoned inclusions in, 69-3531 ;
Antarctica, with sapphirine in granulite,
69-825 ; *Bavaria,* smoky, 69-3391 ;
Czechoslovakia, ocelli in gabbro, pseudo-
morphs after olivine, 69-3454 ; *England,*
in Chalk, 69-109 ; *Europe,* in Chalk,
69-109 ; *Finland,* in migmatites, O
isotope ratios, 69-1295 ; *France,* gas
inclusions in, 69-2214, in fissures in
karst, 69-2521, in marls, inclusions in,
69-3296, 3 phase inclusions in, 69-3168,
with pseudocleavages in breccia and
vein, 69-2570 ; *Honshu,* combined crystal,
69-3294, far-IR, 69-2639 ; *Hungary,*
grains from borings, roundness, 69-1683 ;
India, pseudomorphous after apophyllite,
69-3621 ; *Italy,* in rhyolite, inclusions in,
69-3359, nodules in basalt, origin, 69-
1576 ; *Kazakh SSR,* densities in different
rocks, 69-3293 ; *Moravia,* origin of
vermicular texture in cryptocrystalline,
69-543 ; *New Zealand,* in rhyolites,
crystallization, 69-708 ; *Ontario,* xenolith
in carbonatite, 69-2567 ; *Siberia,* gas-
liquid inclusions in, anal., 69-1135,
regeneration in oil reservoir rocks, 69-
2559, solids in inclusions, 69-1370 ;
South Africa, inclusions in, 69-2448 ;
Tasmania, fluid inclusions in, 69-2955 ;
Ukrainian SSR, gas-liquid inclusions in,
69-1298, smoky, comp. of inclusions,
69-1299 ; *Urals,* inclusions in vein,
69-3170 ; *Western Australia,* gem locali-
ties, 69-1245
- diorite line, *North America,* 69-2469
-, -fluorite veins, *Transbaikalia,* correla-
tion anal. across, 69-454
- kaolinite-muscovite mixture, changes
on firing, pore size distribution, 69-98
uartzite, anal., 69-1310 ; average Au in,
69-3102 ; *France,* black, bed in granite,
comp., 69-2561 ; *India,* orbicular struc-
ture in, 69-3443, structural anal., 69-3585 ;
Italian Alps, petrography, genesis, 69-
1711 ; *Switzerland,* petrography, 69-2590
uartzitic sandstones, anal., 69-1310
uebec v. Canada
ueen Maud Land v. Antarctica
ueensland v. Australia
ueluzite, term revived, 69-231
uench furnaces, *T* control and calibration,
69-1216
uérigut, Ariège v. France
uetana v. Chile
Rabbit Ears range v. Colorado
Rabigh v. Saudi Arabia
Rader creek, Boulder v. Montana
Radioactive elements, *Tennessee,* sorption by sediment constituents, 69-398 ; *Ukrainian SSR,* in ilmenites, 69-1266
— — minerals, determination by γ-ray spectrometry, 69-854 ; scintillation counter for study of, 69-1888 ; *East Pakistan,* in beach placers, 69-2009 ; *Italy,* in skarns, 69-2938
— springs, *USSR,* 69-1357
Radioactivity, date of maximum fall-out of ^{90}Sr, 69-342 ; in fossils, 69-1339 ; *Antarctica,* of rocks, K, Th, U, 69-385 ; *Caucasus,* age of volcanic rocks, 69-384 ; *Chile,* associated with Fe deposits, 69-198 ; *Cook Islands,* origin, 69-401 ; *Italy,* age of volcanic rocks, 69-384, in melanite, 69-3210 ; *Kamchatka,* age of volcanic rocks, 69-384 ; *Mediterranean Sea,* of sediments, 69-2630 ; *New Mexico,* in quartz monzonite, 69-2480 ; *Orange Free State,* cause of 'blasting' and corrosion in conglomerates, 69-3438 ; *Tennessee,* of river sediments, 69-3130 ; *Texas,* of granite, 69-1625
Radiobaryte, *Romania,* with baryte, 69-1505
Radiocarbon dating, effect of variations in Earth's magnetic field, 69-916
Radiolarites, *Italy,* 69-3560
Radium, analysis by γ-ray spectrometry, 69-957 ; in phosphate rocks, possible radiation hazard, 69-889 ; removal of ^{210}Po from, 69-1849 ; *Black Sea,* in water, 69-2201 ; *New Mexico,* migration from U ores, 69-1813 ; *Sea of Azov,* in water, 69-2201 ; *USSR,* in spring-water, determination, 69-1357
Radon, measurement in 'ground air', 69-68 ; *Surtsey,* in volcanic gas, anal., 69-760 ; *USSR,* in spring water, determination, 69-1357
Ragtown v. Nevada
Raguinite, *Yugoslavia,* new mineral, anal., X-ray, formula, reflectivity, 69-2382, X-ray, 69-3326 ;
Ragusa region, Sicily v. Italy
Rajasthan v. India
Rajgarh, Rajasthan v. India
Rajhara colliery v. India
Rajpura, Rajasthan v. India
Rakha, Singhbhum, Bihar v. India
Rakha mines, Bihar v. India
Ramagundam coalfield, Andhra Pradesh v. India
Raman spectra, of orthosilicates and cyclosilicates, 69-3607
Ramberg v. Germany
Ramkrishnapur coalfield, Andhra Pradesh v. India
Rammelsberg, Harz mts. v. Germany
Rammelsbergite, 69-1501 ; structural stability, 69-1957 ; *Czechoslovakia,* 69-2385 ; *Newfoundland,* in arsenic, 69-1133
Ramsdellite, *France,* 69-2985
Ranchi, Bihar v. India
Rancié v. France
Ranciéite, comp., hydration, localities, X-ray, 69-3320 ; *Cuba,* anal., X-ray, t.g.a., 69-3320 ; *France,* comp., sp.gr., opt., X-ray, d.t.a., formula, 69-2336
Rangeley–Oquossoc areas v. Maine
Ranomena v. Malagasy Republic
Ranwick uranium mine, Ontario v. Canada
Rapakivi texture, cause in granites, 69-3440 ; *India,* in 'Central Gneisses', 69-3467
Raphisiderite, *Italy,* identical with hematite, 69-1484
Rare-earth elements, computer analysis of γ-spectra, 69-70 ; determination by mass spectrometry, 69-79 ; in accessory minerals of granites, comp., 69-378 ; in phosphorites, 69-1147 ; lanthanide determination by neutron activation analysis, 69-69 ; separation by partition paper chromatography, 69-70 ; *Germany,* in oolitic iron ore, 69-1336 ; *New Zealand,* in stream sediments, anal., 69-397 ; *Tadzhik SSR,* in orthite, 69-964
— — minerals, *Colorado,* in carbonate veins, 69-1778 ; *New Zealand,* in stream sediments, 69-397 ; *South Africa,* occurrence and reserves, 69-2940
Rare earths, in allanite, effect on hardness, 69-3219 ; in basic rocks, 69-1303 ; in minerals, relation to environment, 69-3070 ; *Colorado,* in thalenite, 69-2268 ; *England,* in fluorites, 69-571 ; *Idaho,* in syenite, 69-2470 ; *Italy,* in inclusions in apatite, 69-3339 ; *Nevada,* in zircons, 69-3204 ; *New Zealand,* in pantellerites, 69-1308 ; *Norway,* in yttrofluorite, 69-1486 ; *Volga river,* in clastic material, 69-396
Rare elements, bacterial leaching from sulphide ores, 69-2141 ; distribution in apogranites and biotite granites, 69-1290 ; geochemical background dispersions, 69-3079 ; migration in hydrothermal processes, 69-1184 ; *Russian Platform,* in peat, 69-402 ; *Siberia,* in volcanic complex, 69-1306 ;
Rare minerals, *Quebec,* in nepheline syenite, 69-1605
Rathite, structure, 69-167
Rauhaugite, *Congo,* chem. anal., 69-679
Ravalli Co. v. Montana
Razoare, Transylvania v. Romania
Realgar, free energy, enthalpy, entropy, 69-3016 ; *Russian SFSR,* in Fe-ore deposit, 69-1765
Rectorite, *Libya,* X-ray, anal., d.t.a., electron microscopy, 69-1909
Red beds, origin, 69-2062
Red Mt. v. California
Red Sea, development of, 69-1787
Redwitzite, biotite comp. in, 69-3269 ; *Germany,* age, 69-1804
Reefs, *Alps,* sedimentology and biology, 69-2513 ; *Germany,* algal-sponge, ecology, amino acids in, 69-2513
Refractive index, determination in non transparent minerals, 69-558 ; determinative techniques, 69-2745 ; photoelectric apparatus for determination by immersion, 69-2747 ; diamond, variation with hydrostatic pressure, 69-847
Refractories, chemical bonds for, 69-3037 ; FeO determination in silicates, 69-2774 ; high temperature polymorphs, 69-280 ; reactions with cement raw materials, 69-280
Refractory minerals, bomb for high temp. decomposition, 69-1866
Reggio Calabria v. Italy
Rehamna v. Morocco
Rehydroxylation, of sericite with acid, 69-84
Renierite, stability, 69-3024
Reno v. Nevada
Reservoir rocks, *Siberia,* time of oil inflow, 69-2559
Retzian, crystallography, X-ray, 69-2374
Reunion Is. v. Indian Ocean
Reykjavik v. Iceland
Rhabdite, in meteorite, structure, 69-1054

Rhabdophane, structure, 69-1070 ; *Idaho,* supergene, anal., 69-3343 ; *Virginia,* in pegmatite, 69-1514
Rhenish Schiefergebirge v. Europe
Rhenium, *Kazakh SSR,* in sulphides, 69-405 ; *Pacific Ocean,* in water, 69-3149 ; *Uzbek SSR,* in sulphides, 69-405
Rhine valley, Heidelberg v. Germany
Rhode Island, *Kent Co.,* chloritoid, 69-1246 ; *Providence Co.,* anatase, 69-1246 ; *Washington Co.,* chloritoid, 69-1246 ; *Westerly,* granite, 69-3433
Rhodes v. Greece
Rhodesia, amino acids in dolomite, 69-1259 ; beryl pegmatites, 69-2989 ; cordierite, enstatite, kyanite, sillimanite, 69-821 ; Cu ores, origin, 69-2933 ; *Lomagundi,* regional metamorphism, Precambrian, dolerites, garnet, 69-3572 ; *Nuanetsi,* ring complex, 69-3450
Rhodesite, *Austria,* in basanite, 69-3618
Rhodium, determination in rocks, 69-2786 — compounds, selenide, structure, 69-1060
Rhodochrosite, equilibrium with Mn oxides, in system Mn–C–O, 69-3031 ; heat and free energy of formation, 69-2050 ; *Colorado,* localities, 69-2687 ; *Italy,* 69-1127 ; *Korea,* 69-1126 ; *Labrador,* calcian, in iron formation, anal., 69-2279
Rhodonite, opt. absorption spectrum 69-1985 ; *India,* 69-823 ; *Italy,* in manganiferous rocks, anal., 69-1446 ; *Labrador,* in iron formation, anal., opt., unit cell, sp.gr., 69-2279 ; *New Jersey,* crystals, 69-2679
Rhodostannite, *Bolivia,* with stannite, anal., 69-1530
Rhodusite, var. of magnesioriebeckite, 69-1445 ; *Kazakh SSR,* mineralogy and genesis, opt., sp.gr., anal., 69-1445 ; *Siberia,* mineralogy and genesis, opt., sp.gr., anal., 69-1445
Rhön v. Germany
Rhum, Inverness-shire v. Scotland
Rhyodacite, experimental melting, 69-1218 ; *Iceland,* in complex dyke, geochemistry, 69-2500 ; *Italy,* hydrothermal crystallization of, anal., 69-3379 ; *Vietnam,* anal., 69-3423, tuffaceous, 69-694
Rhyolite, average Au in, 69-3102 ; chem. anal. study, 69-3139 ; eddies as flow direction indicators, 69-2505 ; origin, 69-3354 ; refr. ind. of experimentally hydrated glass, 69-3055 ; *Arizona,* anal., 69-2406 ; *Australia,* age, 69-4 ; *Brazil,* in subvolcanic complex, 69-727 ; *California,* pumiceous, anal., petrography, 69-2406 ; *Colorado,* age of dykes, 69-2713 ; *France,* K_2O in, 69-656 ; *Germany,* postmagmatic alteration of, 69-2556 ; *Iceland,* in complex dyke, geochemistry, 69-2500 ; *Nevada,* anal., 69-2406 ; *New Mexico,* age, geology, magnetism, 69-2406 ; *New Zealand,* from andesite magma differentiation, 69-749, petrography, anal., 69-708, trace elements in, origin, 69-745 ; *Portugal,* petrology, anal., 69-658 ; *Queensland,* mineralized in contact breccia, 69-1106 ; *Rocky Mts.,* calc-alkalic, alkalis in, anal., 69-3357 ; *Shetland,* age, 69-909 ; *South China Sea,* anal., 69-1599 ; *USA,* anal., 69-2472
Rhyolitic rocks, *New Zealand,* geochemistry, origin, 69-1309
Richelle v. Belgium
Rickardite, *Colorado,* 69-2957
Riebeckite, *Kenya,* anal., opt., sp.gr., X-ray, 69-526 ; *North America,* 69-1095 ; *Siberia,* isomorphous series in apogranite, anal., 69-3260 ; *South Africa,* 69-1095 ; *Western Australia,* 69-1095
— -tremolite, *Labrador,* in iron formation, anal., opt., unit cell, sp.gr., 69-2279
Ries Crater, Bavaria v. Germany
Riggins quadrangle v. Idaho
Rila Mts. v. Bulgaria
Rimella, Val Mastallone v. Italy
Ring-complex, *Nigeria,* origin, 69-3406, structures, 69-1624 ; *Rhodesia,* granite-gabbro, 69-3450
Ring-dyke, *Baja California,* tonalite, 69-2484 ; *Colorado,* age and anal. of rock types, 69-3451 ; *Ireland,* granophyre, 69-750 ; *Wyoming,* age and anal. of rock, 69-3451
Rinkite, structure, 69-1993
Rio de la Plata v. Argentina; Uruguay
Riofinex v. Ireland
Rio Grande do Sul v. Brazil
Rio Marina, Elba v. Italy
Rio Masul, Alto Adige v. Italy
Rio Ribeira de Iguapé v. Brazil
Rio Tinto v. Spain
Ripidolite, equilibrium data, 69-1215
Ripple marks, *Romania,* in flysch, classification, 69-3486
Risör, Aust-Agder v. Norway
Ritter Hot Springs, Grant Co. v. Oregon
Rivara massif v. Italy
Riviera di Ponente v. Italy
Road Gulch, Wet mts. v. Colorado
Road stone, surface polishing, 69-839
Roam, Singhbhum, Bihar v. India
Roberts Victor mine, Kimberley v. South Africa
Robinsonite, *British Columbia,* Bi-, anal., X-ray, 69-2351
Roccastrada, Tuscan v. Ita
Rock analysis, 69-942, 1310 ; book, 69-1897 ; judging ability of analysts, 69-2221 ; spectrophotometry of solution, 69-941 ; Ag by atomic absorption, 69-951 ; Ag, field method, 69-1860 ; Bi in altered rocks, 69-1878 ; Ca and Mg, rapid, 69-1856 ; Cu, 69-1861 ; F, rapid, 69-1869 ; Hg, field method for nanogram quantities, 69-948 ; Hg, sub microgram amounts, 69-1877 ; Pd, in parts-per-billion range, 69-949 ; precious metals by neutron activation, 69-2803 ; Si and Al by XRF, 69-1884 ; Th, 69-1867
Rockbridgeite, zincian, anal., X-ray, 69-3338
Rock creek, British Columbia v. Canada
Rocks, brittle–ductile transition, 69-1741 ; elastic anisotropy of olivine-bearing, 69-1740 ; ion exchange capacity of weathered crystalline, 69-1905 ; pressure and electrical resistivity, 69-1748 ; representation of 4 components on regular tetrahedron of plexiglass, 69-937 ; thin section, for electron microprobe, 69-29 ; *Australia,* genesis of porphyry-like, 69-3516 ; *Canada,* for the collector, 69-2672 ; *Malawi,* supracrustal, petrochemistry, origin, 69-1680 ; *Nevada,* hydrothermal alteration, 69-1359
Rock salt *v.* halite
Rocky mts. v. North America ; USA
Rocky range, Beaver Co. v. Utah
Rocky river, Tasmania v. Australia
Rodalquilar, Almeria v. Spain
Rodalquilarite, *Spain,* in gold-bearing vein, H., sp.gr., opt., anal., X-ray, d.t.a., t.g.a., origin, 69-622
Rødberg rock, *Fen area,* as Th deposit, anal., 69-222
Rodingite, *Alaska,* inclusions in serpentinites, 69-2569 ; *Maryland,* 69-3593
Roebourne, Western Australia v. Austr
Roggianite, crystallography, EM, 69-334 *Italy,* new mineral, anal., d.t.a., X-r formula, 69-3345
Rolava creek v. Czechoslovakia
Roldán mesa, Almeria v. Spain
Romania, chloritoid, 69-1421 ; metallog map of Fe deposits, 69-1088 ; rip marks in flysch, 69-3486 ; *Baia M* volcanic rocks, 69-3390 ; *Baie Sp* Pb-Zn mineralization, 69-3390 ; *Ba Carpathians,* isorthoclases, 69-147 *Călimani mts., Carpathians,* trace ments in volcanites, 69-1307 ; *Car thians,* banatites and metallogene 69-1089, black shales, model of g syncline furrow, 69-1685, ophiolites metallogeneses, 69-1089, pumpelly lotrite, 69-1715, siliceous deposits, 1684, volcanites and metallogene 69-1089 ; *Coasta lui Rusu, Carpathi* peridotitic rocks, 69-1439 ; *Coşna,* m ganese ore, 69-1335 ; *Coşna val* crystalline schists, 69-1716 ; *Dadu,* m ganese ore, 69-1335 ; *Ditrau, east Carpathians,* schist, stilpnomelane, 1715 ; *eastern Carpathians,* crystal schists, 69-1716 ; *Gutîi, Carpathi* trace elements in volcanites, 69-13 *Ilva valley, Carpathians,* trace element volcanites, 69-1307 ; *Kisbánya,* pyr tite, 69-1059 ; *Leşul Ursului,* Cu, Zn ore deposit, 69-1261 ; *Moh Carpathians,* isorthoclases, 69-147 *Molidvişul-Nedei, Carpathians,* isort clases, 69-1471 ; *Neagra Sarului val Carpathians,* trace elements in volcani 69-1307 ; *Nedeiu, Carpathians,* isort clases, 69-1471 ; *Ostra,* baryte, 69-15 *Pop Ivan–Tulghes,* metamorphic ro 69-1717 ; *Preluca massif,* schist, 69-10 *Razoare, Transylvania,* bentonite fr pegmatite, 69-1005 ; *Sub-Carpathi* siliceous deposits, 69-1684 ; *Suşita, pathians,* isorthoclases, 69-1471 ; *Ti valley,* crystalline schists, 69-1716
Rome v. Italy
Rondonia v. Brazil
Rønne, Bornholm v. Denmark
Rookhope, Durham v. England
Roseite, *Ethiopia,* in laterites, anal., 69-1
Rosetta, Nile Delta v. Egypt
Rosia, Siena v. Italy
Ross Ice Shelf v. Antarctica
Ross Is. v. Antarctica
Rossleben-Unstrut v. Germany
Ross-shire v. Scotland
Ross volcano, Auckland Islands v. N Zealand
Rostov v. Russian SFSR
Rottenstone, *Derbyshire,* chalcedonic sil anal., 69-772
Roughton Gill, Cumberland v. England
Roussillon v. France
Rozenite, *Ontario,* 69-1773
Rubidium, geochemical behaviour in ro 69-1819 ; in G–2, 69-1378 ; in GS 69-1376 ; in standard rocks, 69-56 ; pa tion coefficients in feldspars, 69-5 spectrographic determination in tekt 69-1886 ; Rb/Sr ratio determination XRF, 69-2797 ; *America,* in rivers marine sediments, 69-1354 ; *Austra* in granulite terranes, 69-1344 ; *Austria* biotites in complex, anal., 69-13 *Colorado,* trace in granite, 69-12 *Italy,* anal. of K/Rb in metamor sequence, 69-3142, in alkali-potassic canoes, 69-3461, in extrusive and p clastic rocks, geochemistry during weat

Iridium (*contd.*)
Ural, 69-1293 ; *Massif Central*, in granitic rocks, 69-657 ; *New Zealand*, in plagioclases, 69-3083 ; *Nigeria*, in granite, 69-80 ; *North Carolina*, in ultramafic rocks, 69-3100 ; *Norway*, in nepheline and feldspar, 69-2317 ; *Sardinia*, in biotite, 69-457 ; *Sicily*, in evaporites, 69-3115 ; *South-West Africa*, in granites, 69-1636 ; *Tuscany*, in biotite and sanidine, 69-2291 ; *Transbaikalia*, in granitic rocks, 69-2172 ; *Ukrainian SSR*, in salt deposits, 69-412 ; *USA*, Rb/Sr ratio as contamination indicator in basalts, 69-2498 ; *USSR*, in K-feldspars, 69-3279, isomorphism in sylvine and carnallite, 69-414
isotopes, *Scotland*, in Newer gabbros, anal., 69-2497 ; *Tasmania*, in granite, post-crystallization movement, 69-1282
iby, *North Carolina*, 69-338 ; *Western Australia*, localities, 69-1245
udny Altai, Siberia v. Russian SFSR
udnyy Kaskad, Siberia v. Russian SFSR
thla v. Germany
uighoek, Transvaal v. South Africa
umania v. Romania
uprechtov v. Czechoslovakia
ussian platform v. Russian SFSR
USSIAN SFSR, septarian nodules, 69-1322 ; *Akkerman, Urals*, goethite, 69-584 ; *Allarechensk, Kola peninsula*, cummingtonite, 69-3245 ; *Belozerka*, blastomylonite hematite ores, specularite, 69-2032 ; *Blyava, Urals*, pyrite deposit, volcanic rocks, 69-1743 ; *Borisovsk, Urals*, churchite, 69-606 ; *Burein, Akishma-Niman interflue*, orbicular granite, 69-3444 ; *Caucasus*, age of volcanic rocks, 69-384, Ar in volcanic gases, 69-445, Cu deposits, 69-1092, galena, sphalerite, 69-1730, Ge in thermal carbonate waters, 69-439, muscovitic hydromica, 69-2865, native As in Hg ores, 69-2958, natural gas, 69-3158, structural facies zones, 69-2738, Ta, Nb, Sn, F in micas, 69-383 ; *Chudzyavr lake, Kola peninsula*, paracharnockite, 69-818 ; *Ciscaucasia*, free radicals in petroleum, 69-1365 ; *Dnieper-Donets basin*, kaolinite, 69-1014 ; *Gogol-Ryshta area, Bokovoy range, Dagestan*, allevardite, 69-2833 ; *Karelia*, age of charnockite, 69-2732, age of Jotnian, 69-2731, granite, 69-3463, residuum metamorphosed to schist, 69-3519 ; *Kazanskaya*, basement rocks, 69-2453 ; *Khibina, Kola peninsula*, apatite, 69-602 ; *Khibiny, Kola peninsula* ijolite-urtite magma, 69-682, inclusions in apatite, 69-3169 ; *Kola*, aenigmatite, 69-2109 ; *Kola peninsula*, baddeleyite in carbonatites, 69-572 ; *Kovdor*, formation of phlogopite-vermiculite, 69-536 ; *Krasnoyarskiy kray*, alkaline basalts, 69-684 ; *Krasnoye lake*, Fe in, 69-2204 ; *Krynka river*, pyrope, 69-272 ; *Kukisvumchorr, Kola peninsula*, apatite, 69-602 ; *Kursk*, tectonics & metamorphism of Fe deposit, 69-3567 ; *Kuybyshev Transvolga region*, sediments, 69-3500 ; *Lovozero, Kola peninsula*, inclusions in apatite, 69-3169 ; *Marum-Keu range, Ural mts.*, eclogites, eclogitization of basic & ultrabasic rocks, 69-817 ; *Mius river*, almandine-pyrope, 69-272 ; *Novoselovsk, Kerch peninsula*, realgar in Fe-ore deposit, 69-1765 ; *P'yanka-Lomovskoye, Urals*, Zn in pyrite deposits, 69-353 ; *Rostov*, diamond, possible deposits, 69-272 ; *Russian platform*, glauconite, 69-2292, rare and trace elements in peat, 69-402 ; *Sea of Okhotsk*, SiO_2 accumulation, 69-3144 ; *Shishim mts., Urals*, clintonite, sheridanite, xanthophyllite, 69-1453 ; *Sivash region*, loess, 69-2193 ; *Taganrog gulf*, almandine-pyrope, 69-272 ; *Tarnyer, Ivdel, Urals*, Cu-Zn ore, contact metamorphic deposit, 69-216 ; *Tators, Caucasus*, galena, sphalerite, 69-1730 ; *Timan region*, Ti & Nb in schists, 69-1346 ; *Tseya, Caucasus*, zoned plagioclase, 69-3396 ; *Ural-Volga region*, L. Carboniferous sediments, 69-2530 ; *Urals*, age of alkaline rocks, 69-1823, bituminous shales, 69-3133, Devonian magmatism and mineralization, 69-3392, diabases & porphyries, 69-2566, dunite-harzburgite, 69-2493, Fe-ore, aeromagnetic prospecting, 69-2026, glacial sediments, 69-2525, inclusions in quartz, 69-3170, pyrite deposits & contact aureole zonation, 69-1999, sulphide ores, 69-1275, svabite, 69-3344, uralborite, vimsite, 69-2388 ; *Verkhnekamsk*, origin of sylvinites, 69-413 ; *Volga river*, rare-earths in clastic material, 69-396 ; *Volga–Don region*, suggested diamond prospecting, 69-272 ; *Volga–Ural*, age of glauconite, diabase, 69-20 ; *Volgograd*, diamond, possible deposits, 69-272 ; *Voronezh*, iron ore, 69-3502 ; *Voronja, Kola peninsula*, kyanite, andalusite, schist, 69-1718 ; *Yakovlev, Kursk*, P in svanbergite, 69-597
— —, SIBERIA, albitized gneiss with lithiophilite, manganese-sicklerite, beryl, mangan-tantalo-columbite, 69-607 ; brithollite, 69-876 ; ^{14}C, Tunguska meteorite, 69-2217 ; cahnite, 69-2347 ; frolovite, 69-2364 ; leucophane, loparite, Li-micas, 69-876 ; magmatism, 69-3399 ; magnocolumbite, 69-582 ; metamorphic facies, mineralization & faults, 69-1997 ; molybdenite, 69-1495 ; origin of C in carbonatites, 69-389 ; pentahydroborite, 69-2364 ; Precambrian trap rocks, 69-687 ; rare-metal mineralization, 69-876 ; regional granitization, 69-3565 ; svabite, 69-3344 ; thorite, 69-876 ; zirconosilicates 69-876 ; *Aldan*, age of rocks, 69-21, hypersthene-sillimanite association, garnet, 69-2273, metasomatism, 69-794, N in carbonates of carbonatites, 69-390 ; *Altai*, origin of pluton, 69-2459 ; *Altai-Sayan*, alkaline rocks, 69-1643, Au, sulphides, skarns, 69-1104, nepheline rocks, 69-1643, P in mafic extrusive rocks, 69-363, isotopic comp. of Pb of galena deposits, 69-352 ; *Baikal*, age of alkaline rocks, 69-1823, cymrite structure, 69-2896, 2897, Sn distribution in granitoids, 69-376 ; *Bol'shoy Taskyl, Altai-Sayan*, titanomagnetite, 69-3307 ; *Dzhida, Transbaikalia*, age of Mo-W deposit, 69-2737 ; *Enisei range*, age of granitic rocks, 69-19, chlorite study, thuringite identified, 69-540 ; *Evrashka-Seene river*, siltstone residuum, 69-2527 ; *Gorny Altai*, garnet anal., 69-1701 ; *Gudzhir, Transbaikalia*, ages of mineralization of pluton, 69-2737 ; *Gula*, carbonatites, 69-2461 ; *Inagla, Yakutia*, chrome-diopside, 69-2644 ; *Kalar, Olekma-Vitim mts.*, charnockite in anorthosite pluton, 69-3565 ; *Katanga*, trap rocks, 69-683 ; *Kharlovo, Altai-Sayan*, titanomagnetite, 69-3307 ; *Khingan*, In, Nb and Sc in cassiterite, 69-1112 ; *Korgeredaba, Tuva*, pseudoleucite, 69-3455 ; *Krasnoyarovsk*, equilibrium thermodynamics of Fe ores, 69-285 ; *Kukulbeisk, Transbaikalia*, granite geochemistry, 69-1287 ; *Kukulbey, Transbaikalia*, geochemistry of granitic rocks, 69-2172 ; *Kureyka*, trap rocks, 69-683 ; *Kureyka river*, bitumen in carbonate concretions, 69-1321 ; *Kuznetsk Alatau*, Nb and Ta in volcanic rocks, 69-379 ; *Lake Baikal*, ground waters, influence of river on comp., 69-2206, isotopic comp. of O & H, 69-437 ; *Maimecha-Kotui*, layered sills, 69-1619 ; *Mal'tsevsk-Kilginsk mine, Transbaikalia*, formation of dravite & plumbojarosite-beudantite, 69-511 ; *Mama*, muscovitization, 69-3264 ; *Maymech-Kotuy*, Nb & Ta in volcanic rocks, 69-379 ; *Minusinsk*, rhodusite, 69-1445 ; *Mir, Yakutia*, surfaces of kimberlite minerals, 69-685, diamonds in eclogite from pipe, 69-2328 ; *Murun*, pseudoleucite rocks, 69-3400 ; *Murunskii massif*, occurrence and origin of kalsilite, 69-550 ; *Noril'sk*, Pd minerals, 69-1525, prehnites, 69-2304, trap rocks, 69-683, troilite, 69-3325, vesuvianite, 69-3213, volcanic complex, 69-1306 ; *Odinochnoye, Sayan*, chlorohastingsite, 69-3258, magnetite ores, carbonate breccias in volcanic vents, 69-3532 ; *Odikhincha*, carbonatite, 69-3453 ; *Ozernoye, Transbaikalia*, Pb-Zn ores, 69-235 ; *Patom Highlands*, Au, 69-2984, 3078 ; *Rudny Altai, Mergenov*, Bi_2Te_5, 69-612 ; *Rudnyy Kaskad, Sayan*, manganobabingtonite, 69-3224 ; *Sayan*, isomorphism of Fe and Mg in ferromagnesian minerals of mafic granulites, 69-423, Ti, V, and Mn in magnetite deposits, 69-355 ; *Selenga river*, influence on comp. of ground waters, 69-2206 ; *Sherlovogora, Transbaikal*, inclusions in quartz, 69-1370 ; *Siberian platform*, ages of trap rocks, 69-2733, 2734, carnallite, 69-2671, comp. of upper mantle, 69-1649, diabase, 69-2458, diamonds, 69-3059, kimberlite, bauxite, clay, 69-1935, magnetite ores, 69-3310, pyrrhotite, 69-3595, troilite, 69-3595 ; *Spokoynoye, Transbaikal*, inclusions in quartz, 69-1135, 1370 ; *Synnyr*, pseudoleucite, synnyrite, 69-2456 ; *Talnakh*, ore deposit, vertical variation, 69-2012, troilite, 69-3325 ; *Transbaikalia*, ages of greisenization, pegmatites, 69-2736, correlation anal. of quartz-fluorite veins, 69-454, F in alkalic rocks, amphiboles, biotites, 69-357, inclusions in quartz & wolframite, 69-1135, new pyrite province, 69-2000, Ta prospecting, 69-1390, zoning of regions of activation, 69-2943 ; *Tuim, Kuznetsk Alatau*, comparison of magmatic complexes by fractional geochemical anal., 69-356 ; *Tunguska*, volcanics, 69-3475 ; *Tuva*, Be in intrusive rocks, 69-360, gabbro-amphibolite, 69-3394, riebeckite isomorphism, 69-3260 ; *Udachnaya-Vostochnaya, Yakutia*, surfaces of kimberlite minerals, 69-685 ; *Udachnaya-Zapadnaya, Yakutia*, surfaces of kimberlite minerals, 69-685 ; *Udzha river*, alkaline rocks, 69-690 ; *Ulkansk*, granites, syenites, 69-1644 ; *Ust'-Balyk*, oil inflow into reservoir rocks, 69-2559, Ti minerals & oil field age, 69-2694 ; *Ust'-Teremki, Transbaikal*, sulphantimonide, teremkovite, 69-1533 ; *Vitim*, Au, 69-2984, nepheline syenite, 69-688 ; *Yakutia*, age of kimberlites, 69-1817, Cr in xenoliths of kimberlite pipes, 69-372, diamonds, 69-3059, 3304, diamond-rutile intergrowth, 69-560, mineral associations of Hg ores, 69-2963, xenoliths in kimberlites, 69-1649 ; *Yeravna, Transbaikal*, Fe ore deposits, origin, 69-2966 ; *Zagadochnaya*,

Russian SFSR (*contd.*)
Yakutia, grospydite xenoliths, 69-1586
— —, soviet far east, *Chukotka*, arsenic, 69-3619 ; *Ebeko, Paramushiro Is., Kuriles*, hydrothermal alteration, 69-3107 ; *Kamchatka*, age of volcanic rocks, 69-384, andesite-basalts, 69-2152, Ar in volcanic gases, 69-445, crust, 69-3476, epidote in hot spring systems, 69-2212, magma, volcanoes, 69-3476 ; *Karymskaya, Kamchatka*, earthquakes, volcano, 69-3477 ; *Kurile Is.*, Ar in volcanic gases, 69-445, Miocene sediments, 69-2455 ; *Maritime kray*, aqueous extracts from sphalerite & galena, 69-350, Sb-Hg ores, 69-1998 ; *Mendeleev volcano, Kunashir island*, manganese minerals, 69-1364 ; *Mount Belaya, Kamchatka*, granodiorite, 69-1637 ; *Paratunka river, Kamchatka*, comp. of pyroxenes, trace elements in basalts, 69-515 ; *Pauzhetka*, hydrothermal albite, 69-2566 ; *Penzhina ridge, Kamchatka*, jadeite in amygdales in meta-extrusives, 69-1721 ; *Penzhinsk range, Kamchatka*, glaucophane metamorphism of metabasalts, 69-420 ; *Sheveluch volcano, Kamchatka*, 1964 eruption & associated earthquakes, 69-1654 ; *Sikhote Alin range*, leucite basalts, 69-686 ; *Sredinny range, Kamchatka*, hydrothermal albite, 69-2566 ; *Urup Is., Kurile Is.*, pillow lavas, 69-2492
Rutgers University, New Brunswick v. New Jersey
Ruth v. Nevada
Ruth creek, Livengood v. Alaska
Ruthenium, neutron activation analysis in rocks, ores and meteorites, 69-2803
Rutherford, 10^9 eV, proposed term, 69-886
Rutile, dispersion, in aqueous solutions, 69-2824 ; force field, elastic constant & specific heat of, 69-2627 ; inclusions in quartz, 69-2448 ; niobian, X-ray, 69-1480 ; *P-T* studies, 69-2064 ; use as IR polarizing prism, 69-1824 ; X-ray, 69-1480 ; Zr in, determination with alizarin-S, 69-953 ; *Austria*, with anatase and rutile, paragenesis, 69-2330 ; *California*, in dyke and schist, anal., genesis, 69-2329 ; *Colorado*, in gneiss, 69-2610 ; *Illinois*, in sands, 69-2550 ; *Maryland*, coexisting with magnetite, apatite and chlorite, anal., 69-3313 ; *Nevada*, in stream sediments, 69-2545 ; *New Zealand*, in gneiss, opt., physical data, 69-824, in ironsand, 69-284 ; *Siberia*, intergrowth with diamond from kimberlite pipe, X-ray, 69-560 ; *South Australia*, in orthopyroxene, 69-1434
Rwanda, cassiterite, 69-2952, 3620, columbo-tantalite, wolfram, list of mineral species & localities, 69-3620 ; *Buranga*, pegmatite, 69-3620 ; *Busoro mine, S.E. of Lake Kivu*, description of mine, 69-2953 ; *Gatumba*, phosphates, 69-3620
Ryukyu (Nansei) Islands v. Japan

Sabatini, Latium v. Italy
Safflorite, structural stability, 69-1957 ; *Czechoslovakia*, 69-2385
Sahara v. Africa
Sainj-Tirthan valleys, Himachal Pradesh v. India
St. Agnes, Cornwall v. England
St. Andreasberg, Harz mts. v. Germany
St. Andrews, Fife v. Scotland
St. Austell, Cornwall v. England
St. Bruno, Quebec v. Canada
St. Cristophe, Isère v. France
St. Day, Cornwall v. England
St.-Flour, Cantal v. France
St. Gallen v. Switzerland
St. Helena v. Atlantic Ocean
St. Hilaire mt., Quebec v. Canada
St. Joe river v. Idaho
St.-Joseph-du-Lac, Quebec v. Canada
St. Kitts, Leeward Islands v. West Indies
St. Lawrence Co. v. New York
St. Leonhard am Horner Wald v. Austria
St.-Martin-des-Prés, Côtes-du-Nord v. France
St.-Paul-la-Roche, Haute Vienne v. France
St. Paul's Rocks v. Atlantic Ocean
St.-Renan, Finistère v. France
St.-Sébastien, Loire-Atlantique v. France
St.-Séverin, Charente v. France
St. Sylvestre, Limousin v. France
St.-Victor, Puy-de-Dôme v. France
St. Vincent v. West Indies
Saitama, Honshu v. Japan
Sakamasy v. Malagasy Republic
Sakiet Sidi, Youssef v. Tunisia
Salai, Kashmir v. India
Sa Lilla, Sardinia v. Italy
Saline minerals, determination of nitrates, 69-2780
Saline valley, Inyo Co. v. California
Salinity, trace element indicators in clays, 69-395
Salite, B isomorphism in, 69-3084 ; *Italy*, manganoan, anal., 69-1446 ; *Malagasy Republic*, enclosing ferripleonaste & olivine in basalt, paragenesis, 69-3306 ; *West Indies*, plutonic, comp., 69-3292
Salmo, British Columbia v. Canada
Salsigne, Aude v. France
Salt, *Iran*, crystal growth causes weathering, 69-1687
— deposits, *Chad*, 69-1770 ; *Germany*, solution data, genesis, 69-2037 ; *Thailand*, 69-2036 ; *Ukrainian SSR*, alkali metal concentrations, anal., 69-412
— lakes, *Galapagos Islands*, chem., 69-433
— marshes, *France*, gypsum in, 69-595
Salton Sea v. California
Saltpetre, *Chile*, origin, 69-1152 ; *Peru*, volcanic origin, 69-1152
Saltpond v. Ghana
Salur Boblili, Andhra Pradesh v. India
Salvador, Bahia v. Brazil
Salzburg v. Austria
Samarium, determination in rocks by neutron activation, 69-69 ; determination in Th compounds from monazite, 69-970 ; neutron activation anal. of chromatogram, 69-70 ; separation by chromatography, 69-70 ; *New Zealand*, in stream sediments, 69-397
San Anastasia, Monte Somma v. Italy
San Bernardino v. California
San Bernardino Co. v. California
San Carlos v. Arizona
San Cataldo, Sicily v. Italy
San Cristobal, Potosi v. Bolivia
Sand, differentiation of types by grain size anal., 69-766 ; ferruginous, mineralogical study, 69-538 ; separated from clay by hydrocyclone, 69-995 ; *Atlantic Ocean*, ferruginous, mineralogically zoned, 69-537 ; *Derbyshire*, silica in pockets in limestone, origin, 69-2515 ; *Egypt*, black, electron probe study, 69-3314 ; *France*, from weathered granites, 69-2878, 2879, over granite, gibbsite in, anal., 69-1930 ; *Illinois*, heavy minerals in, 69-2550 ; *Massachusetts*, Au, Cu, corundum, gahnite & magnetic spherules in beach, 69-2543 ; *Monte Somma*, mineral 69-2523 ; *Pakistan*, origin, 69-1688
Sandbergite, *Poland*, X-ray, crystal dr ing, stereographic projection, 69-568
Sandinway beach, Cornwall v. England
San Diego Co. v. California
San Diego mine, San Diego Co. v. Califo
Sandstone, anal., 69-1310 ; average Au 69-3102 ; bi-modality, 69-3482 ; variations of magnetic properties, 1756 ; titanohematite in, 69-17 *Alaska*, laumontitized, 69-2320 ; *Ap lachians*, origin & diagenesis fi fossils, 69-2513 ; *Assam*, alternating v clay, origin, 69-3503 ; *Australia*, modal, 69-3482 ; *Czechoslovakia*, cha in comp. during Palaeozoic, 69-34 *Finland*, blocks, pyrite-bearing, a 69-1669 ; *India*, petrology, 69-35 *Kansas*, dickite and kaolinite, 69-19 *Madras*, ground-water in, 69-31 *Scotland*, 69-1671, Tertiary geomagn field, 69-2656 ; *Shetland*, age, 69-9 *Siberia*, Jurassic, mineralogy, 69-25 *South Africa*, monazite-bearing ferru ous, radiometric survey over, 69-29 *Sweden*, geology, anal., 69-2410 ; *Tai* heavy minerals, 69-777 ; *USA*, epigen U deposits in, 69-2006 ; *USSR*, anal galena and sphalerite in, 69-30 *Wyoming*, fractionation of U isot in, 69-2180
Sanford hill, Tahawus v. New York
San Francisco peninsula v. California
Sanidine, calculated powder patterns, 2757 ; high-pressure transition to landite structure, 69-150 ; high-*T* ther dynamic properties, 69-1167 ; mi properties of crystalline solutions, 2048, 2049 ; *Argentina*, in basalt, a 69-728 ; *Austria*, in basalt, albite cont 69-671 ; *China*, phenocrysts, opt., 695 ; *Italy*, Rb and K in, 69-12 *Spain*, in lamprophyres, anal., 69-5 *Tuscany*, in ignimbrite, with biot Na, K and Rb in, 69-2291 ; *Wyom* coexisting with calcic plagioclase volcanics, 69-3430
San'in v. Japan
San Joaquin valley v. California
San Juan v. Argentina
San Juan basin v. New Mexico
San Juan Co. v. Colorado
San Juan mts. v. Colorado
San Luis v. Argentina
San Marino on Fiora, Grosseto v. Italy
San Martino di Monteneve, Alto Adig Italy
San Pietro Is., Sardinia v. Italy
San Stefano Is., Sardinia v. Italy
Santa Catarina v. Brazil
Santa Comba Dão, Viseu v. Portugal
Santa Cruz Co. v. Arizona
Santa Maria, Graubünden v. Switzerland
Santa Maria di Licodia, Sicily v. Italy
Santa Monica mts. v. California
Santa Rita mts., Santa Cruz Co. v. Ari
Santein valley, Pyrénées v. France
Santorin, Nea Kameni v. Mediterranean
San Vicenzo, Tuscany v. Italy
Sào Gabriel, Rio Grande do Sul v. Brazi
São Lourenço v. Brazil
Saponite, charge balance between i 69-2301 ; on surface of lead glass, 69-8 *Banffshire*, in metamorphic limest X-ray, d.t.a., EM, 69-107
Sapphire, gem, from Soviet Union's fi 69-326 ; *Queensland*, localities, 69-3 methods of prospecting, 69-337 ; *Wes Australia*, localities, 69-1245

ophirine, *Antarctica*, with quartz in granulite, opt., 69-825 ; *Brazil*, opt., X-ray, 69-883 ; *Greenland*, structure, 69-2907 ; *Malagasy Republic*, 69-1772
prolite, *Washington*, clay deposits in, 69-2870
rdinia v. Italy
rema Is. v. Estonian SSR
r-e-Sang, Badakhshan v. Afghanistan
rgardon v. Kazakh SSR
rgasso Sea v. Atlantic Ocean
rkinite, 69-2397 ; structure, 69-1080, 2398
rmientite, *Argentina*, anal., d.t.a., t.g.a., IR, X-ray, 69-2375
rroch, Sardinia v. Italy
skatchewan v. Canada
uconite, charge balance between ions, 69-2301
UDI ARABIA, *Rabigh*, jasperoid, baryte, granodiorite, 69-1137
wage river, Tasmania v. Australia
woie v. France
wada circle, X-ray spectrometer geometry, 69-65
xony v. Germany
yan, Siberia v. Russian SFSR
andinavian shield v. Europe
andium, analogues of aegirine, andradite, melanotekite & spodumene synthesized, opt., X-ray, 69-308 ; analogue of beryl synthesized, 69-307 ; as trace element in minerals, 69-1254 ; crystal chemistry in minerals, 69-1254 ; in andesites, 69-2168 ; neutron activation determination in meteorites, 69-71 ; substoichiometric ion exchange separation in meteorites, 69-71 ; *Japan*, abundance in igneous rocks, 69-2160 ; *Malagasy Republic*, in pegmatites, 69-368 ; *New Zealand*, in augites, hornblendes, and hypersthenes, 69-3083 ; *St. Kitts*, in lavas, 69-724 ; *Siberia*, in cassiterite, 69-1112 ; *Utah*, in Al-phosphates, crandallite and variscite, 69-600
ania v. Sweden
apolite, anal., stoichiometry, 69-2318 ; S coordination in, 69-551 ; *Andhra Pradesh*, mizzonitic in norite, anal., origin, 69-3298 ; *New South Wales*, in inclusions in basic pipes, anal., opt., 69-3428
awt Hill, Co. Antrim v. Ireland
ena, Alto Adige v. Italy
hairerite, *California*, in Quaternary deposits, 69-2538
hapbachite, *Uzbeck SSR*, 69-224
haurteite, 69-621 ; synthesized, cell dimensions, 69-1195
heelite, *Colorado*, in greisen, 69-1263 ; *Cumberland*, veins, 69-2415 ; *Italy*, 69-2960 ; *Korea*, geology of mine, 69-1109, in pegmatite, 69-1109 ; *Malagasy Republic*, Mo in, fluorescence of, 69-2636 ; *Pyrénées*, from skarn mineralization in limestone, 69-2010 ; *South Africa*, occurrence and reserves, 69-2940
-powellite crystals, synthesis, goniometric study, 69-287
hirmeck, Vosges v. France
hist, average Au in, 69-3102 ; definition of term, 69-2573 ; tr. elements in hornblendes & biotites in, 69-422 ; *Ardnamurchan*, chem. & mineralogy, 69-2288 ; *Ditrau*, 69-1715 ; *Finland*, Precambrian, geochemistry, conditions of deposition, 69-1345 ; *France*, age, 69-1803 ; *Germany*, contact metamorphism of, anal., 69-3526, fabric patterns, 69-2445 ; *Italy*, petrography of calcschists, 69-2443 ; *Japan*, garnet in, anal., 69-2259, pelitic & quartz, anal., geology, 69-2282 ; *Karelia*, representing metamorphosed residuum, 69-3519 ; *Kola peninsula*, aluminous, 69-1718 ; *Massif Central*, geochemistry, anal., 69-3549, nodular, 69-3553 ; *Ontario*, Ti in micas in, as metamorphic grade indicator, 69-1723 ; *Pyrenees*, relation between magnetism & structure, 69-837 ; *Romania*, bentonite in, 69-1005, structure & stratigraphy, 69-1716 ; *Sweden*, 69-2576 ; *Switzerland*, calcareous, petrography, 69-2590
—, albite-pyroxene-glaucophane, *California*, anal., 69-3284
—, andalusite, *France*, origin, anal., 69-799
—, anthophyllite, *India*, 69-3625
—, carbonaceous, geochemistry, 69-1345
—, chlorite, *Austria*, opaque minerals in, 69-2591
—, chlorite-garnet, *India*, structural anal., 69-3585
—, chlorite-glaucophane, free & combined water in, 69-1890
—, chlorite-talc, *Washington D.C.*, anal., derived from pyroxenite, 69-2611
—, chlorite-tremolite, *Spain*, sill, petrography, 69-659
—, crystalline, classification, 69-2573 ; *Alto Adige*, 69-2585 ; *Italy*, chem., opt., 69-2588
—, glaucophane, pressure of formation, 69-306 ; *California*, age, 69-1816, retrograde changes, mineralogy, anal., physical props., 69-1725 ; *Italian Alps*, petrography, genesis, anal., 69-1711 ; *Kamchatka*, emission spectrographic anal., 69-420
—, graphitic, *Italy*, 69-2587 ; *Russian SFSR*, Ti & Nb in, origin, 69-1346
—, hornblende, *California*, age, 69-1815
—, hornblende-chlorite, *India*, gneiss pebbles in, 69-3580
—, lawsonite-glaucophane, *Italy*, 69-3560
—, magnesioriebeckite - gorceixite, *Tanzania*, mineralogy, 69-525
—, mica, *California*, age, 69-1815 ; *France*, age, 69-907 ; *India*, inclusions in garnets in, 69-3582, structural anal., 69-3582 ; *Italian Alps*, petrography, genesis, anal., 69-1711 ; *Massif Central*, anal., 69-657 ; *Morocco*, parageneses & textures, 69-3569 ; *Spain*, 69-812, amphibolite facies, 69-813
—, pelitic, pressure of formation, 69-306
—, talc, *Germany*, mineralogy, anal., d.t.a., t.g.a., 69-2299
—, talc-tremolite-anthophyllite, *New York*, 69-2988
Schlieren, *Italy*, in granitic rocks, comp., 69-3386
Schneeberg, Saxony v. Germany
Scholzite, *Bohemia*, in pegmatite, origin, opt., X-ray, anal., 69-608
Schorl, synthesis, sp.gr., X-ray, opt., 69-2127
Schreibersite, with cohenite, in meteorite, 69-480
Schwarzwald massif v. Germany
Scientific American, Earth sciences collected reprints, 69-2820
Scleroclase, structure, 69-167
Scoglio di Seulo, Sardinia v. Italy
Scolecite, *Honshu*, in volcanic rocks, anal., opt., X-ray, heat treatment, 69-2325 ; *Orange Free State*, in clastics, opt., 69-3411
Scortico v. Italy
Scotia Arc v. Antarctica
Scotian shelf v. Atlantic Ocean
SCOTLAND, age of Torridonian sediments, 69-911 ; ages and subdivision of Precambrian, 69-1806 ; Carboniferous-Permian volcanicity, review, 69-3364 ; chloritoid, 69-1419 ; hydrocarbons, 69-3113 ; palaeoclimate during Torridonian, weathering of Lewisian, 69-1670 ; Rb/Sr isotopes in Newer Gabbros, 69-2497 ; Tertiary geomagnetic field, 69-2656 ; *Western Highlands*, regional metamorphism of minor intrusions, 69-1704
—, ABERDEENSHIRE, orthopyroxenes, 69-1561 ; *Arnage*, cordierite-norite petrogenesis, 69-2497, cordierite xenolithic rocks, 69-1561 ; *Belhelvie*, Sr isotopes in magma, 69-2497 ; *Gartly*, 14Å swelling mineral, 69-2850 ; *Haddo House*, cordierite-norite petrogenesis, 69-2497, cordierite xenolithic rocks, 69-1561 ; *Insch*, Sr isotopes in magma, 69-2497
—, ANGUS, geology excursion guide, 69-1896 ; *Glen Esk*, metamorphism, geological guide, 69-1896
—, ARGYLLSHIRE, *Ardnamurchan*, mineralogy of schists, 69-2288 ; *Kentallen*, breccia pipes, 69-1562 ; *Kintyre*, stratigraphy, tectonics, 69-1671 ; *Sithean Sluaigh*, metamorphism of phyllites, 69-2564
—, BANFFSHIRE, clay minerals in metamorphic limestone, X-ray, d.t.a., EM, 69-107 ; saponite, 69-107
—, BUTE, *Arran*, fossil fulgurites, 69-893
—, FIFE, geology excursion guide, 69-1896 ; *Elie Ness*, pyrope in agglomerate, 69-1415 ; *St. Andrews*, geological guide, 69-1896
—, INVERNESS-SHIRE, *Ben Nevis*, crystallization of magmas, 69-638 ; *Cuillin, Skye*, allivalite, tholeiitic rock, 69-1638, ultrabasic dykes, 69-2414; *Glen Dessary*, petrology of metamorphosed syenite, 69-1708 ; *Great Bernera, Outer Hebrides*, metadolerite dyke rocks, 69-1707 ; *Mingulay, Outer Hebrides*, dolerite dyke, 69-3363 ; *Outer Hebrides*, bytownite, 69-3290 ; *Rhum*, distribution of P in basic layered intrusion, 69-362, origin of granitic magmas, 69-752 ; *Skye*, amphibole, ferrotschermakitic hornblende, 69-1441, metamorphism, Moine Nappe, 69-1706, origin of granitic magmas, 69-752, origin of translation lamellae in olivines, 69-502 ; *Strathaird peninsula, Skye*, ultrabasic dykes, 69-2414
—, KINCARDINESHIRE, *Stonehaven*, geological guide, 69-1896
—, KIRKCUDBRIGHTSHIRE, *Cairnsmore of Fleet*, granite, 69-1618, 1845
—, PERTHSHIRE, *Comrie*, igneous rock complex, metamorphic aureole, geological guide, 69-1896
—, ROSS-SHIRE, *Loch Duich*, eclogite, garnet, 69-1705 ; *Loch Kerry*, amphibolites, 69-2577
—, SUTHERLAND, *Loch Ailsh, Assynt*, clinopyroxenes, origin of basic & ultrabasic rocks, 69-1646 ; *Lochinver*, coexisting pyroxenes, 69-2274
—, SHETLAND IS., ages of sandstones & contemporaneous rocks, 69-909, hydatogenetic alteration of metasediment, 69-103 ; *Moo Wick, Fetlar*, kaolin, 69-103 ; *Tactigill burn, Tresta*, kaolin, 69-103 ; *Unst*, natural Na-vermiculite, 69-2855
Sea-floor spreading, 69-2703, 2819 ; changes in direction, 69-1785 ; linked with hypothesis for origin of calc-alkaline rocks, 69-1218 ; *Gulf of Alaska*, 69-2700

Sea level, eustatic changes & oceanic ridges, 69-2697
Sea-water *v.* water, sea-
Sea of Azov v. USSR
Seal lake, Newfoundland v. Canada
Searlesite, *California*, in altered tuffs, 69-788
Searles lake, San Bernardino v. California
Sea of Japan v. Asia
Sea of Okhotsk v. Russian SFSR
Sechura desert v. Peru
Sedimentary rocks, abundance of N, 69-344 ; average Au in, 69-3102 ; carbonate, non-carbonate content & carbonate grain size, 69-2513 ; classification, 69-3484 ; density of joints in, 69-2512 ; formation of anhydrite in, 69-2082 ; geochemistry of porphyrins, chlorins & polycyclic aromatics, 69-400 ; geochemistry, petrography, anal., 69-1310 ; index for pebble-shapes, 69-3488 ; *Carpathians*, Sr in carbonate-sulphate rocks, 69-2179 ; *Florida*, carbonaceous, metal enrichment due to sorption by humate, 69-1334 ; *Kazakh SSR*, zeolites in, 69-2321 ; *Oregon*, ages, 69-2717 ; *Siberia*, pyritic ores in, 69-2000 ; *South Dakota*, geology, 69-719 ; *Sweden*, geology, anal., 69-2410, Jotnian, petrology, 69-2514 ; *Tasmania*, remanent magnetism, 69-2664 ; *Washington*, ages, 69-2717 ; *Yorkshire*, X-ray study, comp., 69-2871
— structures, experimental in silt, 69-3491 ; in galena and sphalerite deposits, 69-1132 ; *England*, in London Clay, 69-3492 ; *Romania*, ripple marks in flysch, 69-3486 ; *Shropshire*, in Precambrian rocks, 69-640
Sedimentation, abnormalities due to submarine seismicity, 69-767 ; in humid zones, book, 69-2822 ; statistical stratification theory 69-2511 ; *Assam* sandstone-lithomarge, alternations, 69-3503 ; *California*, Cainozoic, 69-2406 ; *Czechoslovakia*, Palaeozoic, 69-3499 ; *Dolomites*, 'sédimentation déclive', 69-2510 ; *France*, intercalated limestones & marls, 69-3496 ; *Germany*, Recent, carbonate, 69-2513 ; *Himalaya*, Tertiary conditions in foothills, 69-776 ; *Nevada*, Cainozoic, 69-2406 ; *Zechstein basin*, carbonate, 69-2513
Sedimentology, erosion of mud, 69-3490 ; experiments in deformation of silts, 69-3491 ; of carbonates, seminar, 69-2513 ; weighting coefficients in transportation study, 69-3489 ; *Austria*, of ' Wettersteinkalk ', 69-2513
Sediments, ancient, origin of fatty acids in, 69-3124 ; bacterial enrichment of metal sulphides in intertidal, 69-2140 ; carbonate, experimental compaction of, 69-2513 ; clastic, classification, size boundaries, 69-3483 ; deep-ocean, akalinity of interstitial solutions, 69-428 ; deep-sea, geochemistry of baryte in, 69-2173 ; deep-sea, IR of opal in, 69-977 ; degree of oxidation, 69-3136 ; determination of Cu in, 69-1861 ; dolomite in, 69-2513 ; epigenetic changes in unconsolidated, 69-1102 ; geochemistry of porphyrins, chlorins & polycyclic aromatics, 69-400 ; igneous appearance, 69-3516 ; interlayered vermiculites & smectites in, 69-1912 ; limestone on beach, model for evolution of roundness, 69-3487 ; marine, classification of muds and silts, 69-3481 ; marine, Sr isotopes in, 69-1349 ; particle rounding in beach gravels, 69-3487 ; protein residues with porphyrins in, 69-3080 ; quick separation of fine fraction, 69-2751 ; Recent, classification, 69-3484 ; retextured during diagenesis, 69-3516 ; siliceous, conditions of deposition, 69-3509 ; siliceous, in geosynclinal areas, origin, 69-3485 ; ultrasonic dispersion, 69-1831 ; *America*, Li, K, Rb & Cs in, 69-1354 ; *Aral Sea*, organic matter in, 69-1311 ; *Argentina*, clay mineral anal., spectrography, 69-3512 ; *Arizona*, Hg in, 69-3132 ; *Atlantic Ocean*, from cores, mass physical properties, 69-3596, organic matter in, 69-394, palygorskite in, 69-104, Tertiary, mineral facies in, X-ray, 69-2551, tr. elements in clay fractions, 69-393, weighting coefficients in transportation study, 69-3489 ; *Australia*, distribution of analcite in, 69-786 ; *Austria*, ' Schlier ' formation, granulometric types, 69-1682 ; *Baffin Bay*, survey, 69-2534 ; *Black Sea*, Mo distribution, 69-1315, organic matter in, 69-1311, sulphides in, 69-1668, W distribution, 69-1316 ; *Burma*, river, 69-2533 ; *California*, continental shelf, Au in, 69-2176 ; *Cameroon*, diagenesis of hydrocarbons, 69-2189 ; *Canadian Shield*, Archaean, anal., 69-1552 ; *Caspian Sea*, organic matter in, 69-1311 ; *Colorado*, anal. for Au in, 69-1103, Hg in, 69-3132, river, radioactivity, 69-3130 ; *Derbyshire*, stream, Mo anomalies, 69-3162 ; *Devon*, magnetism, 69-2657 ; *Florida*, Recent, organic geochemistry, 69-3128 ; *France*, fatty acids in, 69-3114, in borings, mineralogy, palaeontology, 69-3493, trace elements, 69-2868 ; *Golfe de Lion*, organic matter in, 69-394 ; *Gulf of Mexico*, stability on continental slope, 69-3597 ; *Hungary*, ' Schlier ' formation, granulometrical types, 69-1681 ; *India*, flood plain, origin, 69-3506, heavy minerals, 69-776, 3504, marine, Mn in, 69-3119 ; *Indian Ocean*, trace metals in, 69-2174 ; *Ireland*, beach, biogenic carbonate, 69-771 ; *Italy*, diagenesis in evaporitic environment, 69-3520, Recent, anal., X-ray, 69-3498 ; *Kurile Islands*, Miocene, 69-2455, Ti, Fe, Al in, 69-3107 ; *Mediterranean Sea*, radioactivity of, 69-2630 ; *Nevada*, stream, heavy minerals in, 69-2545 ; *Oregon*, continental shelf, Au distribution, 69-392 ; *New Zealand*, rare-earths in streams, 69-397 ; *Norway*, sulphide deposits in, 69-1093, West Caledonian geosynclinal, 69-3545 ; *Pacific Ocean*, from cores, mass physical properties, 69-3596, geochemistry, comp., anal., 69-1313, Hg in, 69-3131, interstitial water in, 69-1320, organic geochemistry of, 69-1312 ; *Russian SFSR*, from basement rocks, 69-3500 ; *Scotland*, Torridonian, age, 69-911 ; *Siberia*, siltstone residuum, 69-2527 ; *South Australia*, remanent magnetism, 69-2663 ; *Staffordshire*, stream, Mo anomalies, 69-3162 ; *Sweden*, petrology, 69-2514 ; *Tadzhik SSR*, clay & clastic mineralogy, anal., 69-1941 ; *Tennessee*, sorption of radioactive elements, 69-398 ; *Ural-Volga region*, L. Carboniferous, mineralogy, 69-2530 ; *USA*, continental shelf, colour, 69-3508, continental shelf, mineral facies, X-ray, 69-2551 ; *Uruguay*, clay mineral anal., spectrography, 69-3512 ; *Utah*, Hg in, 69-3132 ; *Uzbek SSR*, Cretaceous, marine origin, 69-2529 ; *Wyoming*, heavy minerals, 69-2547 ; *Yorkshire*, borehole, trace elements in, 69-3111
Sedlec v. Czechoslovakia
Sedličany, Bohemia v. Czechoslovakia
Seismicity, submarine as cause of sedimentation abnormalities, 69-767 ; *New Zealand*, depth & andesite comp., 69-1657
Seismology, & global tectonics, 69-2699 ; *Hawaiian Is.*, 69-1628 ; *Ivrea zone*, 69-2698 ; *Kamchatka*, of volcano, 69-34
Selenates, Ba, Pb & Sr, thermal expansion of, 69-2633 ; *Puy-de-Dôme*, Pb with mimetite, 69-559
Selenga river, Siberia v. Russian SFSR
Selenides, *Czechoslovakia*, 69-871
Selenite, *Puy-de-Dôme*, hydrated of U, & Pb, anal., opt., 69-559
Selenium, haloes for sulphide ore prospecting, 69-433 ; in chondrites, 69-2235 ; waters of ore-deposits, 69-434 ; *Colorado* in U-V orebodies, 69-1119 ; *Puy-de-Dôme*, native in granite, properties 69-559 ; *USA*, in black shales, 69-2175 ; *Wyoming*, in U deposits, 69-1269
Seligmannite, *Lengenbach*, 69-2352
Semmering v. Austria
Semseyite, *Massif Central*, 69-2959
Senaite, structural relationship with manetoplumbite & davidite, 69-173
Senones, Vosges v. France
Sepiolite, experimental precipitation and genesis, 69-3054 ; surface crystal chemistry, 69-1916 ; *California*, in evaporite 69-1324 ; *Cameroon*, in bauxite, X-ray, EM, 69-2861 ; *Texas*, occurrence, age 69-106 ; *USA*, in continental shale sediments, X-ray, 69-2551
Septarian nodules, *France*, oil-bearing 69-3127 ; *Ohio*, origin of whewellite 69-609 ; *Russian SFSR*, neocrystalline minerals in cracks, 69-1322
Serandite, opt. absorption spectrum, 1985
Serbia v. Yugoslavia
Serendibite, *New York*, space group cell dimensions, 69-1051 ; *Tanzania*, marble, 69-2363
Sericite, age-determination, 69-25 ; and X-ray, 69-84 ; dehydroxylation, rehydroxylation, structure, 69-84
Serpentine, flotation, 69-30 ; scanning E 69-933 ; thermodynamic properties, 1178 ; transformation at 180°C alkaline surroundings, 69-1203 ; *Manitoba*, X-ray, d.t.a., opt., 69-229 *Massachusetts*, precious, 69-1246
Serpentine–Kougarok area, Seward peninsula v. Alaska
Serpentinite, dissolution, 69-315 ; experiments on formation, 69-317 ; he capacity, 69-840 ; laterization experiments, 69-317 ; podzolization experiments, 69-317 ; weak at dehydrati temp., 69-1555 ; *Alaska*, Ni & Cu, & Ag lodes, 69-2948, tectonic inclusio in, 69-2569 ; *Austria*, opaque minerals 69-2591 ; *Brazil*, pre-metamorphism, 2486 ; *Carlsberg ridge*, anal., 69-339 *Czechoslovakia*, 69-872 ; *Egypt*, che d.t.a., X-ray, petrography, origin, 3405 ; *Italy*, 69-668, anal. of minera 69-1408, containing magnetite ore, 229, weathering products, 69-993 ; *Maryland*, 69-3593 ; *South Africa*, chrysot ore bearer, 69-1141 ; *Switzerland*, an of minerals, 69-1408 ; *Togo*, chrom lenses in, 69-1138
Serpentinization, of Alpine peridotit 69-796 ; related metasomatism, 69-79
Serpierite, chem., opt., X-ray, 69-3336
Serradilla, Caceres v. Spain

rra do Curral v. Brazil
rre, Jura v. France
rre de Montner, Pyrénées-Orientales v. France
sia-Lanzo, Piemonte v. Italy
tting Lake, Manitoba v. Canada
even Lakes, Rila mts. v. Bulgaria
even Stones, Cornwall v. England
everginite–manganseverginite isomorphous series, 69-507
evern valley v. England ; Wales
eward peninsula v. Alaska
eydisehir v. Turkey
hale, average Au in, 69-3102 ; reactions of water and NaCl solutions with, 69-1202 ; *Alberta,* mineralogy, chem., X-ray, XRF, 69-1007 ; *Australia,* age, 69-3, Os/Re in, sedimentation rate, 69-3172 ; *British Isles,* foundation characteristics, 69-838 ; *Cornwall,* anal., 69-1016 ; *Devon,* anal., 69-1011 ; *Idaho,* anal., comp., 69-3509, metals in carbonaceous marine, 69-2175 ; *Illinois,* Ni and V in, anal., 69-1366 ; *Italy,* bituminous, anal., 69-409 ; *Montana,* metals in carbonaceous marine, 69-2175 ; *Nevada,* anal., comp., 69-3509, metals in carbonaceous marine, 69-2175 ; *Scotland,* hydrocarbons in, 69-3113 ; *Urals,* bituminous, origin, 69-3133 ; *USA,* alteration in carbonaceous associated with Zn-Pb ore, 69-2142, Cd in, 69-2177 ; *Utah,* metals in carbonaceous marine, 69-2175 ; *Yorkshire,* pyritic, anal., derivation, diagenesis, 69-3112
Shan v. Burma
Shattuckite, structure, 69-1048
Sheep Creek range, Lander Co. v. Nevada
Shelburne Falls v. Massachusetts
Shells, *Lake Constance,* mollusc, Sr in, 69-2513
Shenandoah National Park v. Virginia
Sheridanite, *Urals,* anal., 69-1453
Sherlovogora, Siberia v. Russian SFSR
Shetland Islands v. Scotland
Sheveluch volcano, Soviet Far East v. Russian SFSR
Shirley basin v. Colorado ; Wyoming
Shishim mts., Urals v. Russian SFSR
Shoa v. Ethiopia
Shock deformation, in meteorites, 69-3173
Shoshone range v. Nevada
Shoshonite, *Austria,* anal., 69-671
Shropshire v. England
Shubnikov groups, magnetic structures described by, 69-1948 ; to describe laminar silicates, 69-1949
Shweminbon, Shan v. Burma
Siberia v. Russian SFSR
Sicily v. Italy
Sicklerite, Mn-, *Siberia,* in gneiss, anal., 69-607
Siderite, Gibbs free energy, 69-3004 ; solid solution with magnesite, 69-3032 ; stability relations with calcite, 69-1192 ; *Ariège,* in bauxite, anal., X-ray, IR, 69-3495 ; *Austria,* replaced by garnet, 69-2937 ; *Bihar,* cement in clastic dykes, 69-3505 ; *Calcutta,* equilibrium in groundwaters, 69-3157 ; *Labrador,* in Fe formation, anal., 69-2279 ; *North Carolina,* on dumps, 69-2681 ; *Quebec,* in Fe formation, anal., 69-2280, localities, 69-2673 ; *Slovakia,* in ore deposit, anal., d.t.a., 69-591
— -chamosite, *Russian SFSR,* formation conditions, 69-3502
Sidobre, Tarn v. France
Sieggraben, Burgenland v. Austria
Siena v. Italy
Sierra Co. v. New Mexico
Sierra Cuchillo, Sonoro Co. v. New Mexico
Sierra de Cabo de Gata v. Spain
Sierra de Cartagena v. Spain
Sierra de las Cabras v. Spain
Sierra de los Cóndores, Córdoba v. Argentina
Sierra Gorda v. Chile
Sierra Leone, inclusions in diamonds, 69-3061
Sierra Morena, Huelva v. Spain
Sierra Nevada v. California; Spain
Sierra Pampeanas v. Argentina
Sierras de Comechingones, Córdoba v. Argentina
Sigulda v. Latvian SSR
Sikhote Alin range, Soviet Far East v. Russian SFSR
Silent canyon, Nye Co. v. Nevada
Silesia v. Poland
Silica, atomic absorption spectroscopy of reaction with MgO, 69-3043 ; balance in ocean, 69-427, 3145, 3146 ; chemical bonding, 69-135 ; crystal lattice energy of modification of, 69-2308 ; determination in glasses by volatilization, 69-1848 ; diagenesis in sea-water, 69-427 ; effect of Fe films on exchange capacity, 69-2181 ; free, determination in baryte ores, 69-1855 ; gel, *T* and intensity of OH vibration bands, 69-2885 ; in carbonate rocks, rapid determination using gelatin, 69-950 ; in sea-water, 69-3144 ; modifications of, survey, 69-1465 ; polymorphous modifications, stability, 69-135 ; sedimentation of dense suspensions, 69-2824 ; shock compression of powders, 69-2098 ; shock-wave equations, 69-2626 ; structure of liquid mixtures with feldspar, 69-1175 ; viscosity of pure, 69-280 ; *Cornwall,* in granites, 69-359 ; *Devon,* in granites, 69-359 ; *France,* in basalts, 69-2418 ; *Gulf of California,* accumulation rate, 69-3144 ; *Hawaii,* content in basalts from refr. ind., 69-2645 ; *Pyrenees,* in springs, origin, 69-3151 ; *Romania,* organic deposits, origin, 69-1684 ; *Sea of Okhotsk,* accumulation rate, 69-3144
— compounds, reaction with ferric hydroxide, 69-2133
— glass, 69-1465 ; quasi-crystalline atomic arrangements in, 69-1170
— minerals, from serpentine, experimentally, 69-1203 ; from trachyandesite, experimentally, 69-1203 ; *California,* in tuffaceous rocks, 69-2319
Silicate minerals, as catalysts, 69-2838 ; benzidine blue reaction on, 69-2838 ; colorimetric determination of Ca in, 69-1857 ; direct microdetermination of Si & Al, 69-2779 ; energy calculations for precipitation, 69-1252 ; of upper mantle, plastic deformation, 69-1739 ; surface layers produced on grinding, 69-836 ; synthesis of rare earth phases in apatites, 69-296 ; *California,* in altered tuffs, 69-788 ; *USA,* in continental shelf sediments, 69-2551
— rocks, atomic absorption anal., 69-57 ; La_2O_3 as absorber in XRF anal., 69-1881 ; P in, 69-1379 ; XRF anal. of major elements, 69-960 ; X-ray spectrofluorimetry anal., 69-1879
— systems, gel as starting material, 69-2045, 2046 ; multicomponent, computation of liquidus isotherms, 69-1177 ; related to basaltic rocks, 69-630
Silicates, bonding of tetrahedra, 69-134 ; chemical bonding, 69-135 ; Christiansen frequencies, 69-3606 ; constitution, 69-134 ; crystal lattice energy of modification of, 69-2308 ; determination of F in, 69-1859 ; ferrous, synthesis, 'buffer-technique', 69-2106 ; framework, electrical conductivity, 69-855, 1750 ; IR emissivities, 69-3606 ; laminar described by Shubnikov groups, 69-1949 ; meta-, in system Na_2O–CaO–SiO_2, d.t.a., X-ray, IR, 69-2101 ; mixing in ferromagnesian, 69-2154 ; Mn-bearing chain, opt. absorption spectra, 69-1985 ; (NaCa)Al[Si_2O_7] & (NaCa)Ga[Si_2O_7] synthesis & structures, 69-2894 ; pyro-, rare earth, synthesized, 69-2105 ; replacement of Si^{4+} in, 69-3208 ; solid solutions & geothermometry, 69-3002 ; structure & crystallography, 69-1945 ; synthesis of $H_2Si_2O_5$, IR, X-ray, 69-3040 ; synthesis of $KHSi_2O_5$, 69-3039 ; tecto-, electrical conductivity of, 69-2652 ; thermal diffusivity of Mg_2SiO_4 & Fe_2SiO_4, 69-2631 ; transformation of trioctahedral to dioctahedral, EM., 69-2131 ; water desorption on & crystal hardness, 69-2621 ; Zn-, high pressure transformations, 69-2114
—, layer, charge balance between ions in 2:1, 69-2301 ; competitive adsorption, 69-96 ; expansible, cation exchange, 69-91 ; pleochroism, 69-1952 ; structure, 69-2901
Siliceous rocks, formation, book, 69-2822 ; hydration of by phenocrysts, 69-3356 ; in geosynclinal areas, comp., origin, 69-3485
Silicic acid, in suspensions of ground quartz, 69-3034 ; surface state, 69-3033
Silicification, *Germany,* of rhyolites, 69-2556
Silico-aluminas, structure & properties of amorphous, 69-2824
Silicocarnotite, from Thomas slag, anal., X-ray, 69-2103
Silicon, determination, 69-53 ; determination in cement by atomic absorption, 69-1876 ; direct microdetermination in silicate minerals, 69-2779 ; effective charges in silicates, 69-135 ; in iron meteorites & Earth's core, 69-3190 ; in phengites, 69-1451, 1452 ; interaction with diamond, 69-2055 ; XRF anal. in rocks, 69-1884 ; *France,* from borehole, stratigraphical profile, 69-1317 ; *Mare Tranquillitatis,* 69-2706 ; *Mexico,* in apatite, 69-2370 ; *Norway,* in nepheline & feldspar, 69-2317
— compounds, carbide, polytypism, 69-1954 ; carbide, epitaxial on diamond, 69-2055
Silicosis, 69-836
Sill, *Minnesota,* age, 69-2716 ; *Siberia,* nephelinite, layered, 69-1619 ; *Snowdonia,* composite, petrogenesis, 69-732
Sillimanite, stability and metamorphic pressures, 69-306 ; *Alto Adige,* in gneisses, 69-2585 ; *Brittany,* from biotite in gneisses, 69-2578 ; *Illinois,* in sands, 69-2550 ; *New Zealand,* in gneiss, opt., physical data, 69-824 ; *Ontario,* relations with gedrite, 69-3588 ; *Rhodesia,* inverted from kyanite, anal., 69-821 ; *Siberia,* paragenesis with hypersthene, 69-2273
Silt, marine, new classification, 69-3481 ; *Algeria,* C & N in, 69-3118 ; *Poland,* heavy minerals in, 69-775
Siltstone, *Cameroon,* clay minerals sequence in core, X-ray, anal., 69-1003
Silver, electrolysis through quartz, 69-2650 ; field method for determination, 69-1860 ; in chondrites, 69-2235 ; in iron meteorites, 69-2236 ; in rocks, determination by atomic absorption spec-

Silver (*contd.*)
trophotometry, 69-951 ; *Alaska,* in sediments, 69-463, in serpentinite, 69-2948, suggested prospecting area, 69-197 ; *Arizona,* 69-2223 ; *Bolivia,* 69-2961 ; *Czechoslovakia,* native, 69-2385 ; *Germany,* 69-2970 ; *Italy,* native, geochemistry, 69-3301 ; *Kazakh SSR,* abundances in sulphide ores, 69-264 ; *Kongsberg,* history of mining, 69-217 ; *Massif Central,* in granitic rocks, 69-657 ; *Nevada,* 69-462, 1121, 2226, anomalous concentration, 69-265 ; *Portugal,* native, in W-Sn ores, 69-2011 ; *Romania* 69-3390, in ore, 69-1261 ; *Tadzhik SSR,* abundances in sulphide ores, 69-264 ; *USA,* in black shales, 69-2175, in Navajo Sandstone, 69-3132 ; *Utah,* 69-1121, distribution, 69-1120, in cuprobismutite, 69-2019, in galena, 69-2976 ; *Wyoming,* in mine waste, 69-2962
— compounds, *Portugal,* sulphoantimonides, in W-Sn ores, 69-2011
— minerals, synthetic Ag_7AsS_6, 69-2383 ; synthetic Ag_7SbS_6, X-ray, 69-2383
— ores, *Alaska,* 69-260, 2977 ; *Ontario,* mineralography, paragenesis, 69-209
— -Pb ores, *New South Wales,* in Consols-type vein, genesis, 69-242
— -Pb-Au-Cu ores, *Western Australia,* 69-259
— -Pb-Zn ores, *Alaska,* 69-236 ; *Ireland,* anal., 69-234 ; *Northern Territory,* in tuffaceous shales, 69-239
Silverband mine, Westmorland v. England
Silvermines, Tipperary v. Ireland
Silver Peak v. Nevada
Silver Plume v. Colorado
Silver Reef v. Utah
Simien mts. v. Ethiopia
Similkameen, British Columbia v. Canada
Simla v. India
Simla hills v. India
Simpson desert v. Australia
Singhbhum, Bihar v. India
Sinhalite, *Tanzania,* in marble, 69-2363
Sinnerite, structure, 69-167
Sirohi, Rajasthan v. India
Sithean Sluaigh, Argyllshire v. Scotland
Sivamalai v. India
Sivash v. Russian SFSR
Sjögrenite, structure, 69-1061
Skaergaard v. Greenland
Skarn, formation of garnet in, 69-1209 ; from aluminosilicate rocks, 69-2123 ; origin, ore mineralization, 69-206 ; *Austria,* garnet in, anal., 69-791 ; *Bohemian massif,* amphiboles in, 69-790 ; *British Columbia,* Sn-silicates in, 69-2260 ; *Czechoslovakia,* lagoriolite in, 69-2258 ; *Idaho,* Cu and Pb-Zn ores in, 69-2483 ; *Italy,* radioactive minerals in, 69-2938 ; *Japan,* hedenbergite and epidote in, 69-2277 ; *Romania,* surrounding bentonite deposit, 69-1005 ; *Sardinia,* 69-1125 ; *Sweden,* mineral lenses in leptite, 69-2033 ; *Russian SFSR,* Au in sulphides in, 69-1104 ; *USSR,* apatite from, e.s.r., 69-2922
Skellefte v. Sweden
Skipton, Yorkshire v. England
Skipton caves, Victoria v. Australia
Skirworth quarry, Yorkshire v. England
Sklodowskite, identification by γ-ray spectrum, 69-854
Skutterudite, *Bavaria,* 69-2670 ; *New South Wales,* in Bi-Mo ores, 69-225
Skye, Inverness-shire v. Scotland
Slana, Alaska range v. Alaska
Slates, *Cornwall,* Cu in, 69-1297 ; *south-west England,* ages, 69-3547 ; *Ukrainian SSR,* chlorite-cummingtonite, anal., mineralogy, 69-1462
Slatina, Bosnia v. Yugoslavia
Slatinka, Moravia v. Czechoslovakia
Slovakia v. Czechoslovakia
Smectite, charge balance between ions, 69-2301 ; hydroxyl interlayers in, 69-1912
Smithite, synthetic, X-ray, opt., 69-292
Smithsonite, *Vietnam,* in Pb-Zn ore, 69-237
Snark creek, South Is. v. New Zealand
Śnieżnik mts., Sudeten mts., v. Poland
Snow, analytical data, 69-1352 ; *Antarctica,* geochem. anal., 69-892
Snowdonia, Caernarvonshire v. Wales
Snowflake mine, Teller Co. v. Colorado
Snow Peak v. Idaho
Snowy mt., Adirondacks v. New York
Snowy mts., New South Wales v. Australia
Soapstone, *India,* anal., X-ray, 69-795
Society Islands v. Pacific Ocean
Sodalite, chlorine-, solid solution with sulphate nosean, 69-2126 ; from dissociation of epidote, 69-1206 ; interaction with Na vapour, 69-1238 ; synthesis, 69-2126 ; *Bolivia,* structure refinement, 69-157
Soda-nitre *v.* nitratine
Sodium, coefficient of diffusion in obsidian, 69-3106 ; determination, 69-57 ; determination in cement by atomic absorption, 69-1876 ; determination in fluid inclusions, 69-973 ; differentiation in upper mantle, 69-1251 ; in alkalic rocks, effect of *T* on distribution, 69-1292 ; in beryl, 69-1432 ; in feldspars, flame photometric determination, 69-943 ; rapid determination by atomic absorption, 69-1874 ; *Arizona,* in volcanic rocks, 69-2406 ; *Cornwall,* in granites, 69-359 ; *Devon,* in granites, 69-359 ; *France,* rate of leaching in rocks, 69-1329 ; *Ivory Coast,* rate of leaching in rocks, 69-1329 ; *Mexico,* in apatite, 69-2370 ; *Nigeria,* in granite, 69-380 ; *Norway,* in nepheline and feldspar, 69-2317 ; *Pyrenees,* in springs, origin, 69-3151 ; *Rajasthan,* in soils, 69-3121 ; *South-West Africa,* in granites, 69-1636 ; *Tuscany,* in biotite and sanidine, 69-2291
— compounds, $NaAlGeO_4$, high *P* phase, structure, 69-171 ; $NaAlSi_3O_8$, high *T* thermodynamic properties of glass, 69-1167 ; NaCl, Debye - Waller factors, 69-162, densification of powder in air, 69-3037, experimental X-ray structure amplitudes, comparison, 69-161, ion overlap, 69-163, sintering of, 69-3037, strain polarizability constant, 69-163, structure factors, 69-162 ; $NaFeGe_2O_6$, structure, X-ray, 69-1974 ; $NaVMoO_6$, structure, 69-1068 ; $Na_4ZnCd[Si_2O_6]_2$, structure, comp., 69-1983 ; *Canada,* origin of sulphate deposits, 69-2990 ; *Colorado,* niobate, anal., structure, corresponds to lueshite, 69-2380 ; *New Zealand,* K_2O/Na_2O ratios in basic igneous rocks, 69-358 ; *USA,* origin of sulphate deposits, 69-2990
— isotopes, in meteorite, 69-2232
Soganliyürük v. Turkey
Sogdianite, *Tadzhik SSR,* in pegmatitic vein, d.t.a., X-ray, anal., sp.gr., H., formula, 69-1539
Soils, Ca–Al exchange equilibria in acid, 69-2842 ; complexing power for Fe of extracts from epicea humus, 69-1333 ; determination of Cu in, 69-1861 ; determination of Hg in sub-microgram amounts, 69-1877 ; effect of chem. change on chemistry of tree tissue, 69-2222 ; field method for determinati of Ag in, 69-1860 ; frequency distributi of elements concentration, 69-3074 Hg in, field determination of nanogra quantities, 69-948 ; influence of exchang able bases on moisture adsorptio 69-2848 ; interlayered vermiculites an smectites in, 69-1912 ; IR studies clay, 69-2825 ; porphyrins, chlorins an polycyclic aromatics in, 69-400 ; selecti migration of Al in, 69-2841 ; volcan ash, stabilization, 69-1917 ; *Australi* gilgai, 69-1936 ; *Colorado,* radio eleme determinations, 69-3129 ; *France,* fro weathered granite, 69-2878, 2879, ov granite, gibbsite in, anal., 69-1930 *Germany,* red from kaolinized basal 69-1934, red with bauxite nodule 69-1934 ; *India,* moisture adsorptic capacities, 69-2849 ; *Italy,* terra ross anal., origin, 69-2522 ; *Lancashire,* 6 116 ; *Massif Central,* profiles, 69-114 *New Brunswick,* clay minerals in pods X-ray, IR, chem., 69-115 ; *Nor Carolina,* humic and fulvic acids i 69-3125 ; *Rajasthan,* geochemistry, 6 3121 ; *Scandinavia,* clay minerals in pr files, X-ray, 69-1939 ; *South Afric* cotton, 69-1936 ; *Uganda,* geochemic survey, 69-3164 ; *Uttar Pradesh,* Mn i 69-3120 ; *Vosges,* profiles, classificatio 69-114
Solar system, Fe fractionation in, 6 341, 2135
Solenhofen, Bavaria v. Germany
Solids, cubic, equation of state of, 69-262
Somali Republic, continental drift, 6 1790
Somma v. Italy
Sondrio v. Italy
Sonoma Co. v. California
Sonora v. Mexico
Sonoraite, *Moctezuma,* opt., X-ray, 69-23
Sonoro Co. v. New Mexico
Sorbyite, *Ontario,* new mineral, X-ra VHN, 69-2384
Sør-Fron, Oppland v. Norway
Sør Rondane mts., Queen Maud Land Antarctica
Soufrière volcano, St. Vincent v. West Indi
South Africa, amino acids in conglome ates & thucholite, 69-1259 ; banded ore, 69-1095 ; Cr in xenoliths of kimberli pipes, 69-372 ; cotton soils, 69-193 diamonds, 69-3058 ; Fe formatio origin, 69-3533 ; inclusions in diamon 69-3061 ; inclusions in quartz, 69-2448 nuclear reactor materials, occurrence reserves, 69-2940 ; pneumoconiosis chromite miners, 69-888 ; radiometr surveys, 69-2939 ; riebeckite, 69-109 *Loolekop,* valleriite, 69-1061 ; *Robe Victor mine, Kimberley,* eclogite xenolit in kimberlite, 69-680, 681 ; kyani eclogite nodules, 69-2595
— —, Cape Province, charnockitic adam lite porphyry, 69-3534; deuteric alterati in porphyry, 69-3534 ; granite, 69-335 *Gordonia,* age of pegmatite, 69-271 *Keimoes-Kakamas,* charnockitic rocks, 6 3570 ; *Kenhardt,* age of pegmatite, 6 2712 ; *Van Rhynsdorp,* monazi mineralization, radiometric survey, 6 2939
— —, Natal, charnockitic rocks, 69-357 radiometric surveys over granites, 6 2939 ; *Zululand,* associated acid & bas rocks, age, Rb/Sr data, 69-2155
— —, Orange Free State, monazite-be

South Africa (*contd.*)
ing ferruginous sandstones, 69-2939 ; radioactive phenomena, 69-3438 ; radiometric surveys, 69-2939 ; zircons in goldfield conglomerates, 69-2255 ; *Basal Reef,* linnaeite, gold, pyrrhotite, uraninite, 69-1130 ; *Bloemfontein,* scolecite, tourmaline, 69-3411
— —, South-West Africa, radiometric surveys, 69-2939 ; *Damaraland,* granites, 69-1636 ; *Orangemund,* diamond, beach placer mining, 69-271
— —, Transvaal, chert, 69-3135 ; radiometric surveys over granites, 69-2939 ; *Bushveld,* bytownite, 69-3290, distribution of P in basic layered intrusion, 69-362, mackinawite, 69-2346, orthopyroxenes, 69-3231, plagioclase, 69-1474, pyroxene trends, 69-3232 ; *Dwars river, Lydenburg,* geology of fragment, 69-3529 ; *Kennedy's Vale, Lydenburg,* titaniferous magnetite, sulphides, 69-2986 ; *Lydenburg,* chromitite, 69-3410 ; *Messina,* Cu ores in breccia pipes, geoelectric exploration, myrmekitic intergrowths, 69-214 ; *Msauli mine, Barberton,* chrysotile, serpentinite, 69-1141 ; *Nietverdiend, Marico,* chromitic deposits, 69-2982 ; *Palabora,* interstratified clay mineral, 69-1906, mackinawite, phoscorite, valleriite, 69-2346 ; *Premier mine, Cullinan,* kimberlite magnetism, 69-2660 ; *Ruighoek, Bushveld,* evolution of lower Critical zone, 69-737 ; *Steelpoort river, Bushveld,* carbonatite, tinguaite, 69-3409 ; *Witwatersrand,* chromite, 69-1482 , origin of pyrite, 69-2933
South America, age determinations, 69-2819 ; *Guiana shield,* Mn ores, 69-230
South Australia v. Australia
South Carolina, kaolin deposits, 69-102 ; monazite deposits, 69-200
South China Sea v. Pacific Ocean
South Crofty mine, Cornwall v. England
South Dakota, *Berne quadrangle, Black Hills,* geology, 69-719 ; *Black Hills,* calcitization of dolomite, solution breccias, 69-2540
South Hardin mine, Ashe Co. v. North Carolina
South Island v. New Zealand
South mine, New South Wales v. Australia
South-West Africa v. South Africa
Soviet Central Asia v. USSR
Soviet Far East v. Russian SFSR
Sövite, *Norway,* Mg in calcite of, 69-3361
Sowie Góry, Sudeten mts. v. Poland
Space groups, special positions, concept extended, 69-121
Spain, chloritoid symmetry, 69-1420 ; *Almadén,* Hg ore, genesis, production data, 69-219 ; *Almería, Rodalquilar,* volcanic rocks, 69-661, volcanism, 69-660, rodalquilarite, 69-622 ; *Aracena, Huelva,* hypersthene parageneses in gneisses, 69-2583, orthopyroxene-hornblende subfacies, 69-2584 ; *Badajoz-Azuaga,* crushed granites & orthogneiss, 69-3556 ; *Betic cordillera,* regional metamorphism, 69-3550 ; *Cabo de Gata,* volcanism, 69-662 ; *Cabo Ortegal,* garnet, zoisite, 69-3217, olivine metagabbro, 69-2424 ; *Caceres, Serradilla,* attapulgite, 69-100 ; *Cerro de los Lobos, Almería,* volcanic rocks, tectonics, 69-1568 ; *Ferrera Is.,* pseudobrookite in soils, 69-578 ; *Galicia,* regional metamorphism, 69-3557, 3558, retrograde metamorphism, 69-3557 ; *Grenada, Sierra Nevada,* dolomite, limestone, mica schist, 69-812, gneiss, pyroclastic origin, 69-812 ; *Jumilla, Murcia,* diopside in volcanics, 69-514 ; *Murcia,* volcanic rocks, 69-1569 ; *Neira,* apatite in granite, 69-2502 ; *Ojén, Málaga,* Ni ores, ultramafic massif, 69-1572 ; *Orense,* mica schist, amphibolite facies, migmatite, 69-813 ; *Palamos, Catalonia,* aplite-pegmatites, 69-1632 ; *Pinto,* aragonite, 69-870 ; *Providencia mine, Léon,* bravoite, villamaninite, Cu, Ni, Co ores, 69-2343 ; *Rio Tinto,* gratonite, jordanite, 69-2348 ; *Rodalquilar,* Au ore syngenetic with ignimbrites, Au veins as fossil fumaroles, 69-258 ; *Roldán mesa, Almería,* volcanic rocks, 69-1567 ; *Sierra de Cabo de Gata,* jarosite in bentonite, 69-598 ; *Sierra de Cartagena,* Pb-Zn mineralization, 69-1107 ; *Sierra de las Cabras,* sanidine in lamprophyres, 69-546 ; *Sierra Morena, Huelva,* metallogeny, 69-3373, sulphides in pyroclastics & limestones, 69-2001 ; *Sierra Nevada,* albite dykes, albitization, 69-789 ; *south,* basement rocks, 69-3556 ; *Viana del Bollo, Galicia,* basement rocks, gneiss & migmatite, 69-3559 ; *Villalba, Lugo,* basic & ultrabasic metamorphosed sills, 69-659
Španí Dolina, Slovakia, v. Czechoslovakia
Spanish Peaks v. Colorado
Spectrochemical analysis, automatic plate reading & computer interpretation, 69-1887
Spectrography, anal. of basaltic rocks, 69-1302 ; anal., of Pb isotopes, 69-78 ; determination of volatile tr. elements in silicates, 69-971 ; precision of methods of isotope anal., 69-76
— emission, a.c. spark method, 69-74 ; anal. of fluid inclusions, 69-973 ; data processing by computer, 69-2793 ; determination of volatile elements 69-969 ; d.c. arc method, 69-74, 75 ; using argon d.c. arc, 69-969 ; *New Zealand,* of obsidians 69-468
Spectrometry, alpha, determination of radioactive equilibrium of U minerals 69-2814
—, gamma-ray, identification of radioactive minerals 69-854 ; K anal., 69-956 ; U, Th & Ra anal., 69-957
—, mass, anal. of Lu in minerals, 69-966 ; anal. of *RE* elements, 69-79 ; anal. of tr. elements in meteorites, 69-967 ; emission regulator for gas-course, 69-2810 ; high frequency ion source, 69-77 ; numerical peak integration device, 69-77 ; of Pb isotopes in rocks & minerals, 69-2773 ; stable isotope dilution method, 69-79
Spectrophotometry, determination of alumina, 69-944 ; determination of Pd in rocks, in parts-per-billion range, 69-949
—, atomic absorption, automatic sample changer, 69-2792 ; determination of Ag in rocks, 69-951 ; determination of Cd in rocks, 69-2789 ; determination of Mo, 69-2784 ; determination of Te, 69-2790 ; rapid anal. of rocks, 69-941
Spectroscopy, atomic absorption, for MgO–SiO_2 reactions, 69-3043 ; theory & application, 69-2783
—, magnetic circular dichroism (MCD), review, 69-2640
—, magneto-optical rotary dispersion (MORD), review, 69-2640
Specular iron, *Russian SFSR,* in blastomylonite Fe ore, 69-2032
Specularite *v.* specular iron
Spencite, anal., stoichiometry, 69-1427
Spessart v. Germany
Spessartine, opt. absorption spectra, 69-2643 ; *California,* 69-3069 ; *Italy,* anal., 69-1446 ; *Labrador,* in Fe formation, anal., 69-2279
Spessartite, *Lake District,* 69-2415
Sphalerite, artificial & natural deposits, 69-1132 ; cadmian, thermal expansion, 69-2632 ; density & stoichiometry, 69-2750 ; effect of tailings on tree tissue, 69-2222 ; Fe in, 69-1058 ; Ge in, 69-1185 ; hydrothermal entry of Fe into, 69-3015 ; localization & distribution of impurities, 69-2340 ; magnetic moment of Fe^{2+}, 69-858 ; melting curve, 69-3018 ; Mössbauer spectra of ^{57}Fe, 69-1037 ; opt. absorption of Cu & Al doped, 69-2052 ; opt. absorption spectra, 69-842 ; synthetic, Cu in, 69-1057 ; thermal expansion, 69-2632 ; *Appalachians,* Hg in, 69-2339 ; *Arizona,* ferroan, 69-2980 ; *Bavaria,* 69-3391 ; *Brazil,* 69-2003 ; *Canada,* colour banding, 69-1736 ; *France,* conditions of deposition, anal., 69-2965 ; *Germany,* 69-2993 ; *India,* tr. elements in, 69-2024 ; *Italy,* 69-2015, 2978, stars in pyrite, 69-3324 ; *Japan,* EM study, 69-2093 ; *Kentucky,* Hg, Cd, Ge, Ca & Sr in, 69-2339 ; *Maryland,* 69-2680 ; *New Brunswick,* In in, 69-2146 ; *New Jersey,* 69-2679 ; *New York,* in dolomite, 69-2682, in Lockport dolomite, 69-2677 ; *North Carolina,* on dumps, 69-2681 ; *Oslo,* 69-2973 ; *Portugal,* in borehole, 69-2971 ; *Pyrenees,* in limestone from skarn mineralization, 69-2010 ; *Russian SFSR,* dendritic & skeletal forms, 69-1730, in septarian nodules, 69-1322 ; *Sardinia,* in the 'Metalliferous Limestone', 69-1503 ; *Soviet Far East,* comp. of aqueous extracts, 69-350 ; *Switzerland,* in dolomite, sedimentary, 69-1272 ; *Tennessee,* Hg, Cd, Ge, Ca & Sr in, 69-2339 ; *USSR,* in sandstone, anal., 69-3092 ; Re & Mo content, 69-405 ; *Uzbek SSR,* Pt group elements in, 69-2147
Sphene, fission track annealing in, 69-2742 ; in granite, Ce-earth content, 69-378 ; lanthanides in, 69-3070 ; Raman spectrum, 69-3607 ; *Azov Sea area,* in granitoids, anal., rare earths, origin, 69-1418 ; *California,* replacement in retrograde glaucophane schist, 69-1725 ; Ta in, 69-2163 ; *Nevada,* in granitoid hybrid rocks, XRF, cell size, 69-3205, in stream sediments, 69-2545 ; *Russian SFSR,* porphyroblasts in schists, 69-1346 ; *Virginia,* in pegmatite, 69-879
Spilite, 69-630 ; *Carlsberg ridge,* anal., mineralogy, genesis, 69-2451 ; *France,* anal., 69-2419 ; *Kilauea,* petrology, H_2O in, origin, 69-1658 ; *North Carolina,* 69-1613
— -keratophyre, *Czechoslovakia,* ore deposits in, 69-250
Spilitic rocks, 69-630
Spindle stage, glass cell for RI liquids, improved crystal holder, 69-919
Spinel, comp. in system Fe_3O_4–Mn_3O_4, 69-3010 ; comp., *T,* & structure, 69-3011 ; equilibrium data, 69-1216 ; from dissociation of epidote, 69-1206 ; hot pressing of, 69-280 ; in meteorite, 69-483 ; magnesium aluminate, dissolution in Na silicate melts, 69-302 ; molar volumes, 69-3047 ; -olivine stability, structural basis for, 69-1042 ; oxidic tin, Mössbauer spectra, 69-1039 ; production from gel, 69-2045 ; ruby, from Soviet Union's fund, 69-326 ;

Spinel (*contd.*)
shock-wave equations, 69-2626 ; structure, 69-2915 ; structural inversion in series $MgCr_2O_4$–$MgFe_2O_4$, 69-2063 ; substoichiometric, magnesioferrite rich, 69-1181 ; synthetic crystal growth, 69-1171 ; thermal diffusivity, 69-2631 ; *Auckland,* in ultramafic nodules, opt., 69-3199 ; *France,* chrome-, in peridotite xenoliths, anal., 69-3524 ; *Ireland,* in larnite-spinel rock, sp.gr., anal., opt., origin, 69-577 ; *Italy,* in xenoliths, opt., X-ray, 69-3525 ; *New South Wales,* in inclusions in basic pipes, anal., opt., 69-3428 ; *South Australia,* in orthopyroxene, anal., 69-1434
—, chromian, *California,* in dunite & harzburgite, anal., 69-3202
—, ferro-, structural vacancies & solid solution decay, 69-1063
Spitzbergen v. Arctic
Spodumene, Sc analogue synthesized, opt., X-ray, 69-308 ; structure of β-, 69-140 ; *California,* gem, 69-3069 ; *Mozambique,* mined from pegmatite, 69-268 ; *South Africa,* occurrence & reserves, 69-2940
Spokane Co. v. Washington
Spokoynoye, Siberia v. Russian SFSR
Spor mt., Western Juab Co. v. Utah
Springdale peninsula, Newfoundland v. Canada
Spurrite, in system CaO–SiO_2–CO_2–H_2O, 69-3045
Sredinny range, Soviet Far East v. Russian SFSR
Sredna Gora v. Bulgaria
Staffordshire v. England
Stainierite, CoOOH in, 69-2338
Stalactites, opal-trona, 69-1204 ; *Argentina,* opal in, 69-884 ; *New Jersey,* fluorescent, 69-2678
Staley v. North Carolina
Standard rocks, 69-467 ; Ce & Eu in, anal., 69-1374 ; colorimetric determination of Ca in, 69-1857 ; compilation of data, 69-1277 ; Li, Rb, Sr, Mn, Co, Ni, Cu in, 69-56 ; neutron activation anal. of Co & Cs, 69-2805 ; neutron activation anal. of Hf, 69-2804 ; neutron activation anal. of P, 69-1379 ; Sr in, 69-58 ; sulphide ore, anal., 69-1278 ; syenite, anal., 69-1278 ; V in, 69-47
— —, 1a (syenite), XRF anal., 69-2219
— —, AGV–1, Cu, Sr & Zn in, 69-3160; spectrophotometric determination of Al_2O_3, 69-944 ; V in, 69-47 ; XRF anal., 69-2219
— —, BCR–1, Cu, Sr & Zn in, 69-3160; spectrophotometric determination of Al_2O_3, 69-944 ; V in, 69-47 ; XRF anal., 69-2219
— —, BM, anal., 69-467
— —, BR, XRF anal., 69-2219 ; Zr in, 69-3161
— —, DTS–1, Cu, Sr & Zn in, 69-3160 ; spectrophotometric determination of Al_2O_3, 69-944 ; XRF anal., 69-2219
— —, G–1, 69-1276 ; neutron activation anal. of Hf, 69-2804 ; neutron activation anal. of Ru, Pd, Os, Ir, Pt, Au, 69-2803 ; P in, 69-1379 ; spectrophotometric determination of Pd, 69-949 ; Sr in, 69-58
— —, G–2, anal., 69–1375 ; Cu, Sr, & Zn in, 69-3160 ; Pb, Rb, Sr, Th & U in, isotope dilution, 69-1378 ; spectrophotometric determination of Al_2O_3, 69-944 ; V in, 69-47 ; XRF anal., 69-2219
— —, GA, XRF anal., 69-2219 ; Zr in, 69-3161
— —, GH, XRF anal., 69-2219 ; Zr in, 69-3161
— —, GM, anal., 69-467
— —, GQS–1, Au-quartz, 69-2806
— —, GR, XRF anal., 69-2219 ; Zr in, 69-3161
— —, GSP–1, 69-1376 ; Cu, Sr, Zn in, 69-3160 ; spectrophotometric determination of Al_2O_3, 69-944 ; V in, 69-47 ; XRF anal., 69-2219
— —, KH, anal., 69-467
— —, NBS phosphate rock, apatite properties in, 69-3340
— —, NBS 70a, K-feldspar for Rb/Sr age, 69-2740
— —, PCC–1, Cu, Sr & Zn in, 69-3160 ; spectrophotometric determination of Al_2O_3, 69-944 ; XRF anal., 69-2219
— —, T–1, anal., 69-942 ; XRF anal., 69-2219
— —, TB, anal., 69-467
— —, W–1, 69-1276, anal., 69-1375; neutron activation anal. of Hf, 69-2804 ; neutron activation anal. of Ru, Pd, Os, Ir, Pt, Au, 69-2803 ; P in, 69-1379 ; Sr in, 69-58 ; spectrophotometric determination of Pd, 69-949 ; Zr in, 69-3161
Stanly Co. v. North Carolina
Stannates, hydroxy-, structure, 69-1069
Stannite, Mössbauer spectra of ^{57}Fe, 69-1037 ; *Bolivia,* anal., 69-1530 ; *Brazil,* 69-2003 ; *New Brunswick,* In in, 69-2146
Stara-Planina v. Bulgaria
Stassfurt v. Germany
Staten Is. v. New York
Statistics, of analytical data & the 'false correlation' problem, 69-453
Staurolite, from breakdown of chloritoid, 69-2107 ; stability, 69-1214 ; stability in system Fe–Al–Si–O–H, 69-2108 ; structure, 69-137, 1979 ; *Austrian Alps,* post-deformation crystallization, 69-814 ; *Idaho, T* of crystallization, 69-2607 ; *Illinois,* in sands, 69-2550 ; *India,* 69-3578 ; *Maine,* pseudomorphed by muscovite, 69-826 ; *Morocco,* in mica schist, 69-3569 ; *South Australia,* pretectonic crystallization, 69-2600
Steamboat Springs, Washoe Co. v. Nevada
Steatites, *Switzerland,* petrography, 69-2590
Steelpoort river, Transvaal v. South Africa
Steiermark v. Austria
Steinach, Bavaria v. Germany
Steinbach, Burgenland v. Austria
Stem v. North Carolina
Stenna Gwyn mine, Cornwall v. England
Stephanite, nuclear quadrupole resonance study, 69-1959 ; *Ontario,* in Ni-Co-Ag ore complex, 69-209
Stereographic projections, construction by computer, 69-44
Sterling Hill v. New Jersey
Sterrettite, *Utah,* in phosphate deposit, 69-600
Sterryite, *Ontario,* new mineral, anal., X-ray, sp.gr., 69-2384
Stevensite, synthesis, 69-3001 ; *Ireland,* 69-867
Stewart mine, San Diego Co. v. California
Stibioconite, *Massif Central,* 69-2959
Stibiodufrenoysite, *Peru,* new mineral, in gratonite, 69-3349
Stibnite, microanal., 69-2350 ; *Idaho,* anal., 69-2676 ; *Massif Central,* 69-2959
— ore, *Burma,* flotation concentration, 69-2025
Stichtite, structure, 69-1061 ; *Moravia,* in serpentinite, H., refr. ind., anal., X-ray, 69-593
Stilbite, exchange of alkali metal cations, 69-1236 ; *Honshu,* anal., opt., 69-2325 ; *Moravia,* in veins in amphibolite, X-ray, opt., sp.gr., anal., d.t.a., t.ga.., 69-553
Stilleite, thermal expansion, 69-2632
Stillwater v. Montana
Stillwater complex v. Montana
Stillwellite, structure, 69-1070, 1982
Stilpnomelane, *Austrid,* 69-3273 ; *Brittany,* in Fe ore, X-ray, 69-1463; *Ditrau,* 69-1715; *Italy,* in schist, 69-3560 ; *Mont Blanc,* in granite, 69-3562 ; *Western Alps,* in metamorphosed rocks, 69-2433
Stishovite, 69-1465 ; –coesite transition, 69-3035
Stjernöy v. Norway
Stock, *Crimean mts.,* origin, 69-2494
Stockton v. Utah
Stoichiometry, of scapolite, 69-2318
Stone carvers, *Japan,* 69-1250
Stonehaven. Kincardineshire v. Scotland
Strain polarizability constant, of sodium chloride, 69-163
Strashmirite, *Bulgaria,* on malachite, anal., X-ray, formula, 69-1541
Strathaird peninsula, Inverness-shire v. Scotland
Strathcona mine, Sudbury, Ontario v. Canada
Stratification, theory, 69-2511
Stretishorn v. Iceland
Stronalite, age, 69-12
Strona valley, Novara v. Italy
Strontianite, thermal expansion, 69-2632
Strontiohilgardite-1Tc, similar to tyretskite, 69-2366
Strontium, accumulation by marine organisms, 69-2199 ; as internal standard for XRF anal. of rocks, 69-1884 ; co-precipitation with aragonite from seawater, distribution coefficient, 69-1323 ; determination in cement by atomic absorption, 69-1876; emission spectrographic determination, 69-2809 ; geochemical behaviour in rocks, 69-1819 ; in baryte, 69-2173 ; in feldspar phenocrysts & groundmass of volcanic rocks, 69-2153 ; in G–2, 69-1378 ; in GSP–1, 69-1376 ; in marine limestones, 69-2513 ; in sea-water, 69-3147 ; in standard rocks, 69-56, 58, 3160 ; partition coefficients in feldspars, 69-545 ; rapid determination by atomic absorption, 69-1874 ; salinity indicator in clays, 69-395 ; sorption on glauconite, 69-2190 ; *Carpathians,* in sediments, 69-2179 ; *Europe,* in Zechstein deposits, 69-415 ; *France,* from borehole, stratigraphical profile, 69-1317 ; *Hungary,* in igneous rocks, 69-3105 ; *Italy,* in alkali-potassic volcanoes, 69-3461, in carbonate rocks, XRF, 69-3116 ; *Lake Constance,* in onkolites & shells, 69-2513 ; *New Zealand,* in augites, hornblendes, hypersthenes, & plagioclases, 69-3083 ; *North Carolina,* in ultramafic rocks, 69-3100 ; *Norway,* in nepheline & feldspar, 69-2317 ; *St. Kitts,* in lavas, 69-724 ; *Tadzhik SSR,* in granitoids, geochemistry, 69-1289 ; *Turkey,* in todorokite, 69-1511 ; *Urals,* Ba/Sr ratio in bituminous shales, 69-3133 ; *USA,* in sphalerite, 69-2339 ; *Vesuvius,* in carbonate sediments & ejecta, 69-1647
— compounds, magnesium carbonate, 69-1189 ; molybdate, structure, 69-1973 ; $Sr_3Ge(OH)_6(SO_4)_2.3H_2O$, synthesized, cell dimensions, 69-1195
— isotopes, date of maximum fall-out of ^{90}Sr, 69-342 ; in ocean-water & marine sediments, 69-1349 ; ratios in baryte, 69-2173 ; *Aberdeenshire,* in cordierite-

Strontium (*contd.*)
norites, ratios during magma differentiation, 69-2497 ; *France,* in charnockite, 69-2722 ; *Hungary,* ratios in igneous rocks, 69-1291 ; *Ivory Coast,* of charnockites & granodiorites, 69-2710 ; *New South Wales,* in xenoliths & matrix of breccia pipes, 69-3138 ; *North Carolina,* in ultramafic rocks, 69-3100 ; *Norway,* in igneous rocks, 69-2727 ; *Queensland,* in granites, 69-2719 ; *Scotland,* in Newer gabbros, anal., 69-2497 ; *southern Africa,* in associated acid & basic igneous rocks, 69-2155 ; *Swaziland,* in associated acid & basic rocks, 69-2155 ; *Tasmania,* in granite, post-crystallization movement, 69-1282 ; *Tennessee,* sorption by carbonates, 69-398 ; *Texas,* disequilibrium in basalt, 69-3360 ; *USA,* in basalts, 69-2498
Strüverite, *Mozambique,* anal., X-ray, sp.gr., 69-1480
Struvite, sub-aerial decomposition, 69-2373 ; *Peru,* decomposes to newberyite, 69-2373
Stubai, Tyrol v. Austria
Stuetzite, *Colorado,* 69-2957
Stylolites, definition, interpretation, 69-1692 ; in carbonate rocks, 69-2513 ; *Western Australia,* in dolomitic limestone, 69-768, in several rock types, origin, 69-3507
Styria v. Austria
Sub-Carpathians v. Romania
Subgreywackes, anal., 69-1310 ; *Shropshire,* anal., 69-640
Submarine canyons, *Baja California,* geology & structure, 69-2549
Subsidence, *Zechstein basin,* 69-2513
Succinite, *Baltic,* H., brittleness, 69-1733
Sudan, earthquakes, 69-1791 ; *Darfour,* volcanism, 69-3404 ; *Jebel Gurgei,* trachyte, 69-3404
Sudbury, Ontario v. Canada
Sudeten v. Poland
Sudeten mts. v. Czechoslovakia; Poland
Su Fruscu, Sardinia v. Italy
Sugarloaf, Boulder Co. v. Colorado
Sulphantimonides, Pb, diagnostic features, 69-3330
Sulphates, IR, 69-2637 ; IR diffraction and spectra of anhydrous, 69-1969 ; symmetry of SO_4^{2-}, IR, 69-2637 ; *Italy,* in fumarolic formations, 69-2932 ; *Pacific Ocean,* in water from cores, 69-1320 ; *Switzerland,* S isotope ratios, 69-1272
Sulphide deposits, *Finland,* associated wallrock alteration, 69-2935
— minerals, Cu-Fe-S, physical properties, 69-2651 ; of formula Cu_3XS_4, comp., structure, opt., d.t.a., 69-565 ; *Baltic Sea,* in sediments, chem., opt., X-ray, origin, 69-1668 ; *Lengenbach,* structures summarized, 69-167 ; *Malagasy Republic,* in intrusive veins, 69-2043 ; *Russian SFSR,* in skarns, Au in, 69-1104 ; *Sweden,* 69-2033
— ores, application to magmas of system Fe–S–O, 69-3017 ; calcite and fluorite pseudomorphs of baryte, 69-2356 ; annealing of single phase polycrystalline, 69-2090 ; bacterial leaching of Tl, In, Ga, Cd, 69-2141 ; determination of Hg in microquantities, 69-947 ; jasperoid in, 69-1136 ; neutron activation anal. of precious metals, 69-2803 ; standard, anal., 69-1278 ; *Bihar,* minor elements in, 69-3087 ; *Brazil,* 69-2003 ; *Czechoslovakia,* genesis, 69-252 ; *Kazakh SSR,* Au and Ag in, distribution, 69-264 ; *New South Wales,* Thackeringa type, 69-241 ; *Norway,* classification and genesis of deposits, 69-1093; *Queensland,* mineralogy, texture, genesis, 69-257 ; *Sardinia,* 69-1125 ; *Siberia,* 69-2000 ; *Spain,* distribution of types, origin, 69-2001 ; *Tadzhik SSR,* Au and Ag in, distribution, 69-264 ; *Urals,* isotopic comp. of Pb, origin, 69-1275 ; *Utah,* 69-2019
Sulphides, Bi–Sb solid solution series, 69-2350 ; decomposition by water vapour, S isotope fractionation in, 69-1273 ; determination by cathode ray polarography, 69-2811 ; determination in oilfield waters, 69-2811 ; enrichment of metal by bacteria, 69-2140 ; formation of sedimentary metal, 69-2140 ; hydrothermal, deviation in isotopic comp., 69-458 ; water desorption and crystal hardness, 69-2621 ; *Germany,* Co-Ni, 69-2993 ; *Italy,* Fe, Ni, Cu, Pb in asbestos deposit, 69-2974 ; *Peru,* As-, 69-3349 ; *Portugal,* in borehole, 69-2971 ; *Stillwater,* Pt-group, in ultramafic zone, 69-2349 ; *Switzerland,* S isotope ratios, 69-1272 ; *Transvaal,* orthomagmatic, in Fe ore pipes, 69-2986
Sulphohalite, *California,* in Quaternary deposits, 69-2538
Sulphosalts, structural classification of all, X-ray, bibliography, 69-2910 ; structural models, 69-1056 ; *Switzerland,* S isotope ratios, 69-1272
Sulphur, as metal collector, 69-2933 ; bonding properties in bornite, 69-1955 ; determination of coordination by electron microprobe, 69-551 ; distribution in carbonaceous schists, 69-1345 ; in bornite, 69-1956 ; in Fe meteorites, 69-2236 ; of hydrothermal sulphides, origin in upper mantle, 69-458 ; *Florida,* in recent sediments, 69-3128 ; *Illinois,* in coal, pyritic and organic, 69-1341 ; *Indonesia,* isotopic comp. in sulphides, 69-410 ; *Poland,* from bacterial alteration of gypsum, 69-2991, geology and origin of deposits, 69-2992 ; *Wyoming,* distribution in U deposits, 69-1269
— compounds, dioxide in smoky quartz, 69-3295 ; *Indonesia,* formation of, 69-410
— isotopes, comparison for biogenic and magmatic-hydrothermal origins, 69-458 ; deviation in hydrothermal sulphides, 69-458 ; fractionation by bacteria, 69-458 ; fractionation in sulphide decomposition by water vapour, 69-1273 ; in evaporites, 69-458 ; indicators to characteristics of petroleum sedimentation basins, 69-457 ; in petroleum, origin of, 69-450 ; ratios in baryte, 69-2173 ; review of literature, 69-458 ; similarity of hydrothermal and meteoritic types, 69-458 ; *France,* in H_2O of crystallization of gypsum, 69-1326 ; *Moldavian SSR,* in pyrite, anhydrite and gypsum, 69-2197 ; *Switzerland,* in sulphides, sulphosalts and sulphate, 69-1272
Sulphurization, of basic and ultrabasic rocks, 69-1305
Sultan Hamud, Machakos v. Kenya
'Sunstone', of Viking saga, 69-2690
Surda, Bihar v. India
Surrey v. England
Surtsey v. Iceland
Susa valley v. Italy
Sušice, Bohemia v. Czechoslovakia
Suşita, Carpathians v. Romania
Sussex v. England
Sutherland v. Scotland
Svabite, *Siberia,* in Fe ore, anal., opt., d.t.a., X-ray, 69-3344 ; *Urals,* in Cu deposit, 69-3344
Svanbergite, *Russian SFSR,* in weathering profile, opt., d.t.a., X-ray, anal., origin of, P in, 69-597
Svornost mine, Jáchymov v. Czechoslovakia
Swabia v. Germany
Swabian Alps (Schwäbische Alb) v. Germany
Swales Mountain area, Elko Co. v. Nevada
Swanage, Dorset v. England
Swartzite, synthesis of large crystals, 69-2081
Swat, West Pakistan v. Pakistan
Swaziland, associated acid and basic rocks, age, Rb/Sr data, 69-2155 ; *Ngwenya,* hematite mined for 28,000 yrs., 69-195
Sweden, age of granite and nepheline syenite, 69-2731 ; apatite-bearing magnetite ores, 69-2028 ; attacolite mineral, 69-3338 ; magnetite, 69-3599 ; *Adak, Skellefte,* structure of orebodies, 69-2490 ; *archipelago S.E. of Stockholm,* supracrustal rocks, 69-2575 ; *Blyberg,* Fe ore, skarn minerals, sulphide minerals, regional metamorphism, 69-2033 ; *Dalarna,* age of Jotnian, 69-2731 ; *Gällivare,* metamorphosed Fe formation; 69-1702 ; *Gävle,* Jotnian rocks, 69-2514 ; *Gävleborg,* petrology, 69-2410 ; *Hvena,* kobellite, 69-2386 ; *Kirunavaara,* Fe ores, 69-2030 ; *Kristineberg, Skellefte,* metamorphism, stratigraphy, 69-2412 ; *Långban,* eveite, 69-2397, joesmithite, 69-2391, parwelite, 69-2393, phlogopite, 69-2289 ; *Los-Hamra,* Precambrian geology, 69-2411 ; *Luossavaara,* Fe ores, 69-2030 ; *Scania,* tectonics, 69-2413, volcanism, 69-2413 ; *Skellefte,* geological evolution, metamorphism, formation of ores, 69-2576 ; *Varberg,* charnockites, 69-2154, 2574, Ti and Mn in coexisting biotite and hornblende, 69-2154
Swiss Alps v. Switzerland
Switzerland, age of minerals, 69-14 ; *Aar,* metamorphism and structures, 69-1697 ; *Aar massif,* basement rocks, 69-1713 ; *Alps,* age of zircons, 69-15, alkali feldspars, crystal structure and geothermal history of Alps, 69-152, muscovite and phengite in metamorphic rocks, 69-533 ; *Bergell Alps,* wollastonite, 69-2669 ; *Binna valley,* sulphide and sulphate paragenesis, 69-1272 ; *Binnental, Wallis,* wallisite, 69-1062 ; *Claro, Leventina, Tessin,* wollastonite, 69-1696 ; *Graubünden,* submarine volcanic rocks, 69-3371 ; *Lengenbach, Binnatal (Binn valley),* baumhauerite, binnite, dufrenoysite, enargite, hutchinsonite, jordanite, marrite, seligmannite, wallisite, 69-2352, hatchite, 69-2352, 2354, lengenbachite, 69-2352, 2354, sulphide minerals, structures summarized, 69-167 ; *Lepontine Alps,* isograds in amphibolites, 69-3563, muscovite, 69-1450 ; *Lepontine area,* fabric anal., 69-1617 ; *Mauvoisin,* petrography, 69-2590 ; *Morcote-Halbinsel, Tessin,* pyroxene porphyrites, 69-3609 ; *Oberhalbstein,* ophiolite, 69-1581 ; *Penser Weisshorn,* hornblende, 69-2489 ; *Sta. Maria, Graubünden,* Bi sulphosalts, 69-3617 ; *Tafeljura,* metamorphism, 69-1694 ; *Tobelwald Alp, Murgtal, St. Gallen,* enargite, 69-2668 ; *Totalp, Davos,* origin of peridotite, serpentinite, 69-1408 ; *Unterengadin,* dickite, 69-1013 ; *Val Verzasca, Tessin Alps,* cordierite, 69-1712

Sydney, New South Wales v. Australia
Sydney basin, New South Wales v. Australia
Syenite, average Au in, 69-3102 ; standard, anal., 69-1278 ; subalkaline with Fe-rich olivine, petrogenesis, 69-820 ; *Andhra Pradesh*, leucosyenites, 69-3421 ; *Assynt*, 69-1646 ; *Congo*, 69-1771, anal., origin, 69-679 ; *Idaho*, anal., tr. elements in, age, 69-2470 ; *Inverness-shire*, metamorphosed, 69-1708 ; *Italy*, age, 69-2726 ; *Malagasy Republic*, geology, age, 69-1595 ; *Malawi*, complexes, petrography, anal., 69-3407 ; *Ontario*, age, 69-1801 ; *Quebec*, 69-2196 ; *Siberia*, age of porphyry dyke, 69-2000 ; *Tien-Shan*, Be : F correlation, distribution of Be, 69-361 ; *Siberia*, Be content, 69-360, pseudoleucite in, 69-2456
—, aegirine, *Ontario*, origin, 69-753
—, aegirine-arfvedsonite-biotite, *Tanzania*, 69-179
—, alkali, *Ontario*, desilication, anal., 69-753 ; *Siberia*, hybridization, petrography, 69-1644
—, augite, *Greenland*, anal., 69-635
—, biotite, *Ontario*, origin, 69-753
—, fayalite, *Nigeria*, in ring complex, anal., 69-3406
—, feldspathoidal, *New Jersey*, age, origin, 69-3458
—, ferrohastingsite, *Ontario*, origin, 69-753
—, garnet, *Siberia*, formation of, 69-688
—, nepheline, Inst. Geol. Sci. monograph, 69-1153 ; *Mauritania*, age, petrology, 69-3402 ; *Ontario*, origin, 69-753, age, 69-1801 ; *Polynesia*, age, 69-17 ; *Quebec*, rare minerals in, 69-1605 ; *Rajasthan*, anal., 69-693 ; *Siberia*, Be content, 69-360, formation, 69-688 ; *Sweden*, age, 69-2731 ; *Virginia*, Th and U in, 69-2166
—, quartz, *Quebec*, age, 69-904
Syenitic rocks, *Czechoslovakia*, anal., genesis, 69-2275
Sylvanite, *Colorado*, 69-2957
Sylvine, *Saskatchewan*, replaces carnallite, age, 69-2536 ; *USSR*, anal., Rb isomorphism in, 69-414
Sylvine rocks, *Russian SFSR*, origin of, 69-413
Sylvinite, *Belorussian SSR*, mining details, 69-2038 ; *Germany*, solution data, genesis, 69-2037 ; *Saskatchewan*, from carnallitite, tr. elements, 69-2536
Sylvinite deposit, *Russian SFSR*, origin of, 69-413
Sylvite *v.* sylvine
Symmetry, development and application to crystallography, 69-1944 ; of circular cylinder, 69-2884
Symplectite, *Poland*, in eclogite, 69-815
Synadelphite, var. 'hemafibrite', crystallography, X-ray, 69-2374
Synnyr, Siberia v. Russian SFSR
Synnyrite, *Siberia*, in alkalic pluton, comp., origin, 69-2456
Syrtlingur, Surtsey v. Iceland
System :
Ab–Or–Q, 69-708
Ab–Or–Q–An, 69-1226
Ab–Or–Q–An–H_2O, 69-2119
Ag–Bi–Pb–S, 69-3021
Ag–Sb, 69-1532
Ag–Te, 69–1497
Al_2O_3–B_2O_3–H_2O, 69-2097
Al_2O_3–Fe_2O_3–H_2O, 69-290, 2059
Al_2O_3–SiO_2–H_2O, 69-3051
(1–*x*) Al_5LiO_8 – *x*$GeAlLiO_4$, 69-3012
$BaSO_4$–NaCl–H_2O, 69-2085
$BaSO_4$–$SrSO_4$–$PbSO_4$, 69-2084
CO_2–HCO_3^-, 69-425
Ca^{2+}–Fe^{2+}–CO_3^{2-}–H_2O, 69-1192
Ca^{2+}–Mg^{2+}–CO_3^{2-}–Cl_2^{2-}–H_2O, 69-2071
$CaCO_3$–SiO_2, 69-1165
$CaCO_3$–$SrCO_3$, 69-1188
$CaMg(CO_3)_2$–$CaFe(CO_3)_2$–$CaMn(CO_3)_2$, 69-298
CaO–Al_2O_3–B_2O_3, 69-2096
CaO–Al_2O_3–B_2O_3–H_2O, 69-2097
CaO–B_2O_3–H_2O, 69-2097
CaO–Ca.$OSiO_2$–$CaSO_4$, 69-1200
CaO–MgO–Al_2O_3, 69-289
CaO–MgO–Al_2O_3–SiO_2, 69-1216
CaO–MgO–Al_2O_3–SiO_2–Fe–O_2–Na_2O, 69-2045
CaO–P_2O_5–H_2O + Fe_2O_3, 69-295
CaO–SiO_2–CO_2–H_2O, 69-3045
CaO–SiO_2–H_2O, 69-303
CaO.SiO_2–2CaO.SiO_2–ZrO_2, 69-280
3CaO.Al_2O_3.6H_2O–3CaO.Cr_2O_3.6H_2O, 69-2065
3CaO.Al_2O_3.6H_2O–3CaO.Fe_2O_3.6H_2O, 69-2065
$Ca(OH)_2$–$CaCO_3$–$Ca_3(PO_4)_2$–H_2O, 69-2089
CdS–CdSe, 69-1504
CoO–TiO_2, 69-3014
Cr_2O_3–Fe_2O_3, 69-2063
CsBr–RbBr, 69-300
CsCl–RbCl, 69-300
$CuFeS_2$, 69-2092
Cu–Fe–Ge–S, 69-3024
Cu-Ge-S, 69-3022
Fe–Al–Si–O–H, 69-2108
Fe–As–S, 69-3016
Fe–Ge–S, 69-3023
Fe–MgO–SiO_2–O_2, 69-1220
Fe–O_2–H_2O–CO_2, 69-3004
Fe–S, 69–2345
Fe–S–O, 69-3017
FeO–Al_2O_3–SiO_2, 69-2111
FeO–Fe_2O_3–Al_2O_3, 69-3013
FeO–Fe_2O_3–Cr_2O_3, 69-3013
3(FeO, MnO)–2Al_2O_3–12SiO_2–K_2O–H_2O, 69-2130
Fe_3O_4–Mn_3O_4, 69-3010
(1–*x*)Fe_5LiO_8–*x*"$GeFeLiO_4$", 69-3012
x"$Ge_5Li_4O_{12}$"–$GeZn_2O_4$, 69-3012
$KAlSiO_4$–Mg_2SiO_4–SiO_2–H_2O, 69–313
$KAlSi_3O_8$–$NaAlSi_3O_8$–H_2O, 69-2120
Mg^{2+}–Fe^{2+}–CO_3^{2-}–Cl_2^{2-}–H_2O, 69-3023
$MgAl_2O_4$–$LiAl_5O_8$, 69-1064
$MgAl_2O_4$–$NiAl_2O_4$, 69-1064
$MgAl_2O_4$–$NiCr_2O_4$, 69-1064
$MgCr_2O_4$–$MgFe_2O_4$, 69-2063, 3011
MgO–Al_2O_3–Cr_2O_3, 69-288
MgO–Al_2O_3–SiO_2, 69-2111
MgO–CO_2–H_2O, 69-2069, 2070
MgO–Cr_2O_3–Fe_2O_3, 69-2063
MgO–FeO–Fe_2O_3, 69-1181
MgO–FeO–(Fe_2O_3)–SiO_2, 69-2106
MgO–$Mg(Al_{1-x}Cr_x)_2O_4$, 69-286
MgO–SiO_2, 69-3044
MgO–SiO_2–Fe–O, 69-2046
MgO–SiO_2–H_2O, 69-1178
MgO–SiO_2–H_2O–CO_2, 69-2071
MgO-ZnO, 69-305
MgO–ZnO–SiO_2, 69-305
$MgSiO_3$–$ZnSiO_3$, 69-305
Mg_2SiO_4–Zn_2SiO_4, 69-305
$Mg_2Si_2O_6$–$MgNiSi_2O_8$, 69-2116
Mn–C–O, 69-3031
$MnCO_3$–$CaCO_3$–$MgCO_3$, 69-2358
$MnTa_2O_6$–$FeTaO_4$, 69-1197
$MnTa_2O_6$–$FeTa_2O_6$–O, 69-1197
$NaAlSiO_4$–SiO_2–H_2O, 69-309
$NaAlSi_3O_8$–$KAlSi_3O_8$–$CaAl_2Si_2O_8$–SiO_2, 69-2119
$Na_2B_4O_7$–$Ca_2B_6O_{11}$–H_2O, 69-2094
NaCl–KCl, 69-3003
Na_2O–CaO–SiO_2, 69-2101
$NiAl_2O_4$–$ZnAl_2O_4$, 69-1064
Pb–As–S, 69-3020
Pb–As–Sb–S, 69-3349
PbO–SiO_2, 69-3042
PbS–$PbCl_2$, 69-1196
SiO_2–Al_2O_3, 69-3036
TiO_2–Na_2O–H_2O, 69-2330
ZnS–CdS, 69-1504
ZnS–CdSe, 69-1504
alkali feldspar–plagioclase–quartz, 69-1226
anthophyllite–chlorite–magnetite, 69-2054
calcite–carbon dioxide–graphite–methane–hydrogen–water vapour, 69-2198
diopside–hedenbergite–acmite, 69-2276
galena–cotunnite, 69-1196
kaolin–1·5Na_2CO_3, 69-316
magnesite–sodium oleate, 69-2072
polylithionite–trilithionite–muscovite, 69-1223
quartz–corundum, 69-2100
quartz–magnesite–water, 69-2129
sodalite–nosean, 69-2126
sulphate–water, 69-1327
talc–minnesotaite–chlorite–magnetite, 69-2054
Systems, multicomponent binary salt, computation of liquidus relationships, 69-277 ; silicate multicomponent, computation and plotting of liquidus isotherms, 69-1177
Szájbelyite, *Ivrea*, anal., chem. formula, d.t.a., X-ray, 69-3337
— –sussexite series, 69-3337
Szőc v. Hungary

Taaffeite, discovery, opt., sp.gr., 69- 323 ; history, 69-324
Tábor massif v. Czechoslovakia
Taburiente caldera, Canary Islands v. Atlantic Ocean
Tacama v. Bolivia
Tachgagalt, Anti-Atlas v. Morocco
Tactigill burn, Shetland Islands v. Scotland
Tactite *v.* skarn
Tacuaral-Itinga, Minas Gerais v. Brazil
Tadzhik depression v. Tadzhik SSR
Tadzhik SSR, epigenesis in Cretaceous rocks, 69-2560 ; *Alai Range*, sogdianite, 69-1539 ; *Gissar range*, bitumen in granitoids, 69-2169, Sr in granitoids, 69-1289 ; *Karamazar*, Au and Ag in sulphide ores, 69-264, rare earth elements, 69-964 ; *Kugi-Lyal, Pamir*, Mg-anthophyllite, 69-2285 ; *Pamirs*, eclogite xenoliths, fergusite-porphyry pipe, 69-3568, galena, 69-3092, Ge in thermal carbonate waters, 69-439, metamorphic rocks, 69-2593 ; *Tadzhik depression*, mineralogy of sediments, 69-1941
Taebaeg mts. v. Korea
Taenite, structure in iron meteorite, 69-3187
Tafeljura v. Switzerland
Tafjord v. Norway
Taganrog gulf v. Russian SFSR
Tahawus v. New York
Tahiti v. Pacific Ocean
Taipa Is. v. Macao
Taitung v. Taiwan
Taiwan (Formosa), heavy minerals, 69-777, 778 ; *Coastal range*, petrography, 69-1600 ; *Chinkuashih*, Au and Cu, 69-3323 ; *Chinkuashih mine*, enargite, luzonite, 69-1496 ; *Hsinkiang*, antigorite, 69-1208 ; *Kuanshan, Taitung*, pectolite with prehnite and calcite in taiwanite, 69-1232

aiwanite, *Taiwan*, 69-1232
alasskiy Alatau v. Kirgizian SSR
alc, equilibrium of formation, 69-1212 ; formation from quartz, magnesite and water, 69-2129 ; hydrothermal alteration in NaOH solution, 69-2134 ; Shubnikov group structure, 69-1949 ; stability during metamorphism, 69-1173 ; structure, 69-2901, 2902 ; synthesis, 69-304 ; thermal data, 69-1173 ; thermodynamic properties, 69-1172 ; *Germany*, anal., d.t.a., t.g.a., 69-2299, in ultrabasic metamorphic rocks, 69-3564 ; *India*, anal., X-ray, 69-795, formation in dolomites, 69-3536 ; *Nepal*, anal., 69-531 ; *New York*, potentially commercial deposit, 69-2988, triclinic structure, F content, 69-145 ; *Uttar Pradesh*, origin, 69-3332
— -carbonate rock, *Egypt*, chem., d.t.a., X-ray, petrography, 69-3405
Talnakh, Siberia v. Russian SFSR
Talnakhite, 69-1526
Tamarugite, *Chile*, structure, 69-2927
Tamworth-Barraba district, New South Wales v. Australia
Tantalite, synthetic, 69-1197
— -columbite, *South Africa*, occurrence and reserves, 69-2940
Tantalum, geochemistry, references, 69-1300 ; in wolframite, 69-3319 ; *California*, in igneous rocks and coexisting minerals, 69-2163 ; *Caucasus*, in micas in granitic rocks, 69-383 ; *Georgian SSR*, in micas in granitic rocks, 69-383 ; *Nigeria*, in granite, 69-380 ; *Pennsylvania*, variation in diabase-granophyre suite, 69-382 ; *Siberia*, in soils, 69-1390, in volcanic rocks, 69-379 ; *Tasmania*, variation in diabase-granophyre suite, 69-382 ; *Transbaikalia*, in granitic rocks, 69-2172 ; *Ukrainian SSR*, in cassiterite, 69-3318 ; *Urals*, in apogranite, 69-381
Tan-Thanh v. Vietnam
Tanti, Córboda v. Argentina
Tanzania, gem zoisite, 69-3066 ; tourmaline, 69-339 ; *Gerevi hills*, zoisite, 69-321 ; *Handeni*, serendibite, sinhalite, 69-2363 ; *Kilonwa*, aegirine-arfvedsonite-biotite syenite, 69-1719 ; *Lake Natron*, chert, 69-1695 ; *Mkulwe*, schist, mineralogy, 69-525 ; *Msusule*, tonalite, T–1, anal., 69-942 ; *Umba valley*, zoisite, 69-320
Tanzanite, 69-320
Tapiolite, synthetic, 69-1197 ; X-ray, 69-1480
Taranaki, North Is. v. New Zealand
Tarapaca v. Chile
Tarawera, North Is. v. New Zealand
Tarbagatai v. Kazakh SSR
Tarbagatay range v. Kazakh SSR
Tarn v. France
Tarnyer, Urals, v. Russian SFSR
Tasmania v. Australia
Taston v. Pennsylvania
Tators, Caucasus v. Russian SFSR
Tauhara volcano, North Is. v. New Zealand
Taupo, North Is. v. New Zealand
Taupo-Rotorua area, North Is. v. New Zealand
Taureana, Reggio Calabria v. Italy
Tavagnasco, Val d'Aosta v. Italy
Tavistock, Devon v. England
Tavistockite, *St. Austell*, discredited, 69-2372 ; *Tavistock*, discredited, 69-2372
Taylor valley v. Antarctica
Tchabalhaléo, Adamoua v. Cameroon
Tectonics, anal. of plutons, 69-735 ; global, and seismology, 69-2699 ; implications of serpentinite weakening, 69-1555 ; significance of regional lineations, 69-738, 739 ; theory for Earth's main features, 69-1793 ; *Australia*, Cartier furrow, a major structure, 69-1792 ; *California*, structural history, 69-2406 ; *Germany*, of gneiss dome, 69-2445 ; *India*, of Precambrian, 69-3585 ; *Italy*, of Apennine orogeny, 69-2441 ; *Moldavian SSR*, 69-3395 ; *Montana*, 69-2406 ; *Nevada*, structural history, 69-2406 ; *Russian SFSR*, of Fe formation, 69-3567 ; *Siberia*, zoning of regions of activation, 69-2943 ; *Spain*, 69-1568 ; *Sweden*, Jotnian, 69-2514, relation to volcanism, 69-2413 ; *S.W. England*, 69-3547 ; *Switzerland*, 69-1697 ; *USA*, Trans-Idaho discontinuity, 69-1553 ; *USSR*, of basement relation with Kama-Kinel' trough, 69-2524 ; *Wyoming*, reflected in heavy mineral distribution, 69-2547
Tectonosphere, development, 69-1794
Teesdale, Durham v. England
Tehran v. Iran
Tektites, IR of water in, 69-3198 ; micro-, in ocean sediments, 69-3197 ; origin by meteoritic impact on the Earth, 69-494 ; origin from terrestrial sedimentary rocks, anal., 69-495 ; primary and secondary types, 69-497 ; sculpturing classification, 69-497 ; SiO_2 determination by volatilization, 69-1848 ; spectrographic determination of Cs, Rb and Li, 69-1886 ; *Liberia*, 69-1407
Tel, Alto Adige v. Italy
Telaga Bodas v. Indonesia
Teller Co. v. Colorado
Telliti, *Italy*, 69-2442
Tellurbismuth, Xe in, 69-1258
Telluride ores, *Colorado*, G.S.A. Mem., 69-2957
Tellurides, identification data, 69-2957
Tellurium, bacterial leaching from sulphide ores, 69-2141 ; determination by atomic absorption, 69-2790 ; effect of Cu on precipitation, 69-1858 ; in chondrites, 69-2235 ; in jasperoid, 69-1388 ; separation from Fe and Au, 69-1871 ; *Colorado*, native, 69-2957 ; *Nevada*, 69-2226 ; *New Mexico*, 69-2228
— compounds, oxide and oxysalts, chem., 69-1963
Temimichat crater, Ghallaman v. Mauritania
Temperature, effect on comp. of groundwaters, 69-438 ; of formation of quartz, 69-1381
Temple mt. v. Utah
Tenabo, Lander Co. v. Nevada
Tenerife, Canary Is. v. Atlantic Ocean
Tennant Creek, Northern Territory v. Australia
Tennessee, clay, 69-2867 ; sphalerite, 69-2339 ; *Clinch river*, sediments, 69-3130 ; *West New Market, Mascot-Jefferson City district*, Zn, 69-2020 ; *Whiteoak Creek*, sorption of radioactive elements, 69-398
Tenorite, *India*, 69-2968
Tephra, *Hawaii*, 69-2406 ; *Sweden*, comp., 69-2413
Tephrite, *Italy*, leucite-, petrography, anal., 69-1574, 2437, haüyne-, petrography, 69-2437 ; *Siberia*, Nb and Ta distribution, 69-379
Tephroite, Raman spectrum, 69-3607 ; *Italy*, 69-1127
Teremkovite, *Transbaikal*, in ores, sp.gr., reflectivity, comp., X-ray, 69-1533
Terranova da Sibari, Calabria v. Italy
Terra rossa, *Appalachians*, bauxitization, 62-2194 ; *France*, 69-3517 ; *Italy*, anal., genesis, 69-2522
'Terre rosse' *v.* terra rossa
Teruggite, *Argentina*, in spring deposit, anal., X-ray, opt., 69-2394
Teschenite, *Virginia*, Th and U in, 69-2166
— -picrite, *New South Wales*, pumpellyite in, 69-2265
Teslić, Bosnia v. Yugoslavia
Tessin v. Switzerland
Tessin Alps v. Switzerland
Tete v. Mozambique
Tetradymite, *Colorado*, 69-2957 ; *India*, in chalcopyrite, anal., 69-3328 ; *New South Wales*, 69-225
Tetrahedrite, *Austria*, Hg-containing in veins, 69-1392 ; *Brazil*, 69-2003 ; *Germany*, 69-2993 ; *Massif Central*, 69-2959 ; *Portugal*, in borehole, 69-2971 ; *Slovakia*, in polymetallic deposit, 69-563, in ore, mineralogy, anal., X-ray, 69-567, geochemistry, 69-566 ; *Switzerland*, with enargite, 69-2668
Texas, thermoluminescence of limestone, 69-1746 ; *Big Bend National Park*, Th and U in alkaline rocks, 69-2166 ; *Buchanan massif*, petrography, Th and U in, 69-1625 ; *Hopkins Co.*, phosphate nodules, 69-3510 ; *Houston–Galveston Bay*, clay minerals from borehole, 69-1937 ; *Llano Co.*, yttrialite, 69-2105 ; *Marble Canyon*, metamorphism, 69-3137 ; *Mound Lake, Lynn* and *Terry Counties*, sepiolite, 69-106 ; *Trans-Pecos*, basalt, 69-3360 ; *Uvalde*, alkalic igneous rocks, 69-3431
Tezuka, Honshu v. Japan
Thaduna mine, Western Australia v. Australia
Thailand, salt resources, 69-2036 ; *Phichit*, gypsum and anhydrite deposits, 60-2039 ; *Pinyok mine*, malayaite, 69-3215
Thalenite, *Colorado*, sp.gr., refr. ind., X-ray, anal., 69-2268
Thallium, determination in Mn ores by XRF anal., 69-1882 ; in galena, X-ray, 69-1186 ; *South-West Africa*, in granites, 69-1636
— compounds, X-ray structural study, 69-2932 ; *Italy*, $Tl_2Ni(SO_4)_2.6H_2O$, structure, thermoanal., 69-2932
Thenardite, *California*, in evaporites, 69-1324 ; *Ross Ice Shelf*, in soils, 69-411
Theralite, *Tenerife*, petrography, 69-1571
Thermal conductivity, of thin films of magnetite, 69-3614
— expansion, of anglesite, baryte & celestine, 69-2633 ; of chromates & selenates, 69-2633 ; of 10 minerals, 69-2632
Thermochemistry, problems of ore deposits, 69-348
Thermodynamics, applied to geochemical processes, 69-347 ; criteria for equilibrium in a mix crystal, 69-3072 ; in metamorphism of siliceous dolomitic limestones, 69-2572 ; property tables of minerals, 69-843
Thermogravimetric analysis, of clays, combined with d.t.a. & d.t.g., 69-989
Thermoluminescence, of ancient pottery, 69-22 ; of fluorites, 69-2634 ; *Meteor Crater*, of rocks in rim, 69-2635 ; *Texas*, natural of limestone, 69-1746
Thermometry, pyroxene with feldspar, 69-3471
Thetford, Quebec v. Canada
Thin film sections, preparation, 69-2749

Thin sections, preparation of polished, 69-1826
Thizon massif, Massif Central v. France
Tholeiite, high-alumina olivine & high-alumina quartz, experimental melting, 69-1218 ; olivine, from lherzolite, 69-1217 ; quartz, from lherzolite, 69-1217 ; *Australia,* olivine, anal., 69-1639 ; *Scotland,* Permo-Carboniferous, 69-3364
Tholeiitic basalt, trace elements in, origin, 69-1629
— magma, origin, 69-1629 ; *Hawaiian Is.,* origin, 69-1628
— rocks, *Hawaii,* SiO_2 content from refr. ind., 69-2645 ; *Skye,* anal., 69-1638
Thomas range v. Utah
Thomas slag, silicocarnotite from, 69-2103
Thomsonite, *USSR,* in alkalic rocks, anal., d.t.a., X-ray, 69-3300
—, strontian, *USSR,* in alkalic rocks, anal., d.t.a., X-ray, 69-3300
Thorianite, constitution & hardness, 69-1734
Thorite, Raman spectrum, 69-3607 ; *Colorado,* in carbonate veins, 69-1778 ; *New Mexico,* 69-2480 ; *Siberia,* 69-876
Thorium, anal. by γ-ray spectrometry, 69-957 ; determination by mobile γ-ray spectrometer, 69-2813 ; determination in rocks & minerals, 69-1867 ; geochemical behaviour in rocks, 69-1819 ; in baryte, 69-2173 ; in G–2, 69-1378 ; in GSP–1, 69-1376 ; in igneous rocks by γ-spectrometry, 69-388 ; in lava & phenocryst, 69-387 ; in phosphate rocks, possible radiation hazard, 69-889 ; *Alaska,* suggested prospecting area, 69-197 ; *Australia,* in granulite terranes, 69-1344 ; *circum-Pacific province,* in volcanic rocks, 69-2165 ; *Colorado,* in lueshite, 69-2380, in soils, 69-3129 ; *France,* in inclusions in granite, 69-3097 ; *Italy,* in alkali-potassic volcanoes, 69-3461 ; *New Mexico,* in thorite, 69-2480 ; *New Zealand,* in stream sediments, 69-397 ; *Norway,* in rødberg rock, anal., 69-222, list of minerals with >0·1%, 69-222 ; *Pennsylvania,* variation in diabase-granophyre suite, 69-382 ; *Russian platform,* in glauconite, 69-2292 ; *Tasmania,* variation in diabase-granophyre suite, 69-382 ; *Texas,* in alkaline rocks, 69-2166, in granite, 69-1625 ; *USA,* contamination indicator in basalts, 69-2498 ; *Virginia,* in alkaline rocks, 69-2166 ; *Washington,* in monazite, 69-2367
— compounds, from monazite, determination of Sm, Eu, Gd, Dy, 69-970
— isotopes, comp. in crustal rocks, reference sample, 69-1377 ; in sea-water, 69-3148 ; *Black Sea,* 69-2202
Thortveitite, indium-, synthesized, 69-2104 ; *Montana,* in fluorite deposit, anal., 69-2675 ; *Norway,* minor elements, 69-3221
Thucholite, *South Africa,* amino acids in, 69-1259
Thulite *v.* clinozoisite
Thulium, *New Zealand,* in stream sediments, 69-397
Thuringia v. Germany
Thuringite, equilibrium data, 69-1215 ; *Poland,* in phyllites & quartzites, anal., sp.gr., d.t.a., t.g.a., 69-539 ; *Siberia,* with chlorites in Zn-Pb deposits, 69-540
Tiassale v. Ivory Coast
Tibâu valley v. Romania
Tiburon peninsula, Marin Co. v. California
Tickow mine, Leicestershire v. England
Tiemannite, *Czechoslovakia,* 69-871
Tien-Shan v. USSR
Till, *Kansas,* differentiation by clay minerals, X-ray, 69-1942
Tillite, *Ontario,* comp., 69-3123 ; *Tien-Shan,* Precambrian, 69-3398
Tilt Cove mine, Newfoundland v. Canada
Timagami v. Canada
Timan v. Russian SFSR
Timber mt. caldera v. Nevada
Tin, assay, 69-60 ; determination in ferrotungsten & tungsten ores, 69-1873 ; in biotite, 69-377, 3269 ; in chondritic meteorites, 69-3184 ; in Mg-Fe borates, Mössbauer spectra, 69-1040 ; in rocks & minerals, 69-377 ; world resources, 69-2949 ; *Alaska,* anomalous in quartz vein, 69-1262, in greisen, 69-2948 ; *Baikal,* in granitoids, 69-376 ; *British Columbia,* in silicates, in skarn, 69-2260 ; *Caucasus,* in micas in granitic rocks, 69-383 ; *Colorado,* in greisen, 69-1263, in granites, 69-1280 ; *Cornwall,* in aureole, 69-1296, new mine, 69-2951 ; *Georgian SSR,* in micas in granitic rocks, 69-383 ; *India,* 69-2954 ; *Massif Central,* in granitic rocks, 69-657 ; *Nevada,* anomalous concentration, 69-265 ; *Norway,* in thortveitite, 69-3221 ; *Romania,* in ore, 69-1261 ; *Spain,* 69-3373
— ore, formation in self-activating zones, 69-2942 ; *Alaska,* trace elements of, 69-1262 ; *Brazil,* with granites, 69-727 ; *New Brunswick,* In in coexisting minerals from, 69-2146 ; *Tasmania,* assessment with portable XRF analyser, 69-61 ; *USSR,* geology, 69-1113 ; *Virginia,* Be in, 69-2145
— -W ore, *Erzgebirge,* at tops of granite stocks, origin, 69-1110, 1111 ; *Portugal,* paragenesis, 69-2011
Tincalconite, stability field, 69-2094
Tinguaite, *Bushveld,* dyke, 69-3409 ; *New Zealand,* analcite, mineralogy & chem., 69-1476
Tinnevelly, Madras v. India
Tintina, Yukon v. Canada
Tintinaite, *Yukon,* Sb analogue of kobellite, X-ray, sp. gr., 69-2386
Tinzenite, axinite group, 69-508
Tipperary v. Ireland
Tirupati v. India
Titanaugite, *Tahiti,* anal., 69-2406 ; *Tristan da Cunha,* in xenoliths, anal., opt., 69-2447
Titanium, assay, 69-60 ; e.p.r. of Ti^{3+} ions, 69-147 ; relation with Fe & V in pyroxenites, 69-369 ; salinity indicator in clays, 69-395 ; substitution for Si in diopside, 69-2117 ; *Andhra Pradesh,* in coexisting pyroxenes, 69-3236 ; *Black Sea,* in Fe-Mn concretions, 69-3134 ; *Buenos Aires,* ore reserves calculated, 69-202 ; *Colorado,* in lueshite, 69-2380 ; *Europe,* in Zechstein deposits, 69-415 ; *France,* from borehole, stratigraphical profile, 69-1317 ; *Germany,* in oolitic iron ore, 69-1336 ; *Kuriles,* migration in hydrothermal alteration, 69-3107 ; *Nigeria,* in granite, 69-380 ; *Norway,* in nepheline & feldspar, 59-2317 ; *Ontario,* in mica as metamorphic grade indicator, 69-1723 ; *Romania,* in ore, 69-1261 ; *Russian SFSR,* in schists, 69-1346 ; *Siberia,* in magnetite deposits, 69-355, in vesuvianite, 69-3213 ; *Sweden,* in coexisting biotite & hornblende, 69-2154 ; *Urals,* in bituminous shales, 69-3133
— compounds, TiO_2–II, *P–T* studies 69-2064 ; *California,* TiO_2/Mn in biotites 69-1294 ; *France,* $FeOTiO_2$, in bauxite d.t.a., t.g.a., X-ray, IR, 69-2516 ; *India* TiO_2 in ultramafic rocks, 69-3101 ; *Pyrénées,* TiO_2 in ultrabasic rocks 69-648 ; *Siberia,* TiO_2 in melanite 69-3400 ; *Ukrainian SSR,* TiO_2 in biotites & host rocks, 69-1460
— minerals, *Arkansas,* 69-2683 ; *India* $FeTiO_3$ minerals, 69-3308 ; *Siberia,* in sandstones, 69-2694
Titanohematite, in red sandstone, 69-1756
Titanomaghemite, *France,* margin of titanomagnetite crystal, anal., 69-573 ; *India,* in Fe ore, genesis, 69-1483
Titanomagnetite, anal. of lamellar phase after etching, 69-2332 ; magnetic self-reversal & oxidation, 69-861 ; synthesis 69-3007 ; *Altai-Sayan,* in gabbro, anal. 69-3307 ; *Egypt,* in sands, anal., 69-3314 ; *Etna,* cause of ferromagnetism in lava anal., 69-575 ; *France,* from andesite anal., 69-573 ; *New Zealand,* heating experiments, 69-283 ; *Sicily,* in lava 69-763
Tobelwald Alp, St. Gallen v. Switzerland
Tobermorite, stability, 69-303 ; structure 69-119 ; *Austria,* in basanite, 69-3618 ; *Italy,* in basalt, X-ray, anal., formula 69-1426
Todorokite, *France,* 69-2985 ; *Turkey,* in Mn ore, anal., X-ray, 69-1511
Togo, *Ahito mts.,* chromite, serpentinite 69-1138
Tokaanu, North Is. v. New Zealand
Tokaj (Tokay) mts. v. Hungary
Tokatoka, North Is. v. New Zealand
Tolfa, Latium v. Italy
Tombarthite, *Norway,* in pegmatite, X-ray anal., d.t.a., H., sp. gr., 69-618
Tonalite, *Antarctica,* petrography, anal. 69-712 ; *Austria,* Rb in biotites, 69-1301 ; *Baja California,* petrology & structure 69-2484 ; *California,* Ta in, 69-2163 ; *Fiji,* age, 69-7 ; *Sardinia,* dyke, minera paragenesis, opt., chem., X-ray, 69-2431 ; *Tanzania,* T–I, anal., 69-942 ; *Trentino* anal., 69-3385
— granite, *Austria,* petrology, 69-1582
Tono, Honshu v. Japan
Tonopah v. Nevada
Tonsteins, 69-769 ; *France,* volcanic, fo coalfield correlation, 69-2520, volcani origin, 69-769, 770, 2519
Topaz, anal., trace elements, colou 69-3216 ; Raman spectrum, 69-3607 ; *Bulgaria,* after feldspar in quartzite anal., d.t.a., opt., X-ray, 69-506 ; *California,* 69-3069 ; *Colorado,* in gneiss 69-2610 ; *Western Australia,* localities 69-1245
Topaz mountain, Thomas range v. Utah
Toppo S. Paolo, Vulture v. Italy
Torbanite, *Scotland,* hydrocarbons in 69-3113
Torbernite, identification by γ-ray spectrum 69-854 ; *France,* 69-2979 ; *India,* 69-298
Tosalite, *Japan,* new serpentine minera 69-1096
Tosa, Shikoku v. Japan
Tosudite, studies in USSR, 69-1921
Totalp, Davos v. Switzerland
Tottori v. Japan
Toulaud-Saint-Cierge la Serre, Ardèche France
Toulon v. France
Tourmaline, cause of absorption bands 69-1033 ; cause of colour, 69-340

Tourmaline (*contd.*)
polarized opt. absorption spectra, 69-846 ; Raman spectrum, 69-3607 ; removal of fluorite from, 69-1863 ; synthesis of group end-members, opt., X-ray, 69-2127 ; synthetic, source of colour, 69-2269 ; synthetic, substitution of elements, 69-340 ; *Burma,* in river sediments, 69-2533 ; *California,* 69-3069 *Finland,* Cr, in gneiss & skarns, anal., opt., X-ray, 69-3227 ; *France,* in pegmatite, 69-869, in pegmatite, anal., refr. ind., 69-3228 ; *Illinois,* in sands, 69-2550 ; *Nevada,* in stream sediments, 69-2545 ; *North Carolina,* in pyrophyllite, anal., 69-1430 ; *Orange Free State,* in clastics, comp., opt., origin, 69-3411 ; *Quebec,* overgrowths, 69-1431 ; *Sardinia,* in veins, comp., opt., 69-2429 ; *S. W. England,* in granitic rocks, Cl in, 69-2270 ; *Tanzania,* opt., XRF, sp. gr., 69-339 ; *Transbaikal,* anal., origin, 69-511 ; *Western Australia,* localities, 69-1245
Tourmalinite, *Sardinia,* veins, chem., 69-2429
Trace elements, as salinity indicators in clays, 69-395 ; atomic flame spectroscopy, 69-2783 ; determination in meteorites, 69-967 ; determination in scapolite, 69-2318 ; direct-reading spectrochemical determination, 69-2807 ; frequency distributions in minerals, 69-3073 ; in basaltic rocks, geochemistry, 69-630 ; in hornblendes & biotites from gneisses & schists, 69-422 ; in iron meteorites, 69-2236 ; in leached zone below Kupferschiefer, 69-1337 ; in quartz, 69-1466 ; in tholeiitic & alkaline basalts, 69-1629 ; in topaz, influence on colour, 69-3216 ; iron ores & artefacts, 69-2182 ; origin of pyrite, 69-561 ; partition coefficients in feldspars, 69-545 ; spectrographic determination of volatiles in silicates, 69-971 ; *Andes,* in 'Andesite' formation, 69-3437 ; *Atlantic Ocean,* in basalts, 69-1607, in clay fractions, 69-393 ; *Azov,* in zircons, 69-2256 ; *California,* in albite-pyroxene-jadeite-glaucophane schist, 69-3284, variation in desert varnish, 69-2184 ; *Colorado,* in granites, 69-1280 ; *Derbyshire,* in limestone adjacent to orefields, 69-3163 ; *Finland,* in K-feldspars, 69-3278 ; *France,* in carbonate rocks, 69-2868, in Jurassic sediments, 69-406, to determine depositional environment, 69-407 ; *Germany,* in U minerals, 69-2148 ; *Greece,* in bauxite & ultrabasic weathering products, 69-2192 ; *Hungary,* in biotites, in granites, 69-1288, in granitic rocks, 69-1281 ; *Idaho,* in syenite, 69-2470 ; *Italy,* in alkali-potassic volcanoes, 69-3461, in garnets, 69-1412 ; *Kamchatka,* in basalts, 69-515 ; *Mexico,* in apatite, 69-2370 ; *Nevada,* variation in desert varnish, 69-2184 ; *New South Wales,* in leucogranite, 69-745 ; *New Zealand,* in ignimbrites, 69-745, in pantellerites, 69-1308, in rhyolites, 69-745 ; *Pennines,* in limestone adjacent to orefields, 69-3163 ; *Queensland,* bentonite, anal., 69-111 ; *Romania,* in volcanites, anal., 69-1307 ; *Russian platform,* in peat, 69-402 ; *Russian SFSR,* in loess, 69-2193, in minerals in septarian nodules, 69-1322 ; *Saskatchewan,* in evaporites, 69-2536 ; *Siberia,* in magnetite deposits, 69-355, in prehnites, 69-2304, in volcanic complex, 69-1306 ; *Slovakia,* in tetrahedrite, 69-566 ; *South Africa,* in granite, spectrography, 69-3358 ; *Yorkshire,* in concretions & sediments, 69-3111, 3112, in fossil wood, in jet, in pyrite, 69-3112
— metals, *Indian Ocean,* in sediments, 69-2174
Trachyandesite, transformation at 180°C in alkaline surroundings, 69-1203 ; *Canary Islands,* petrography, 69-2425 ; *Nevada,* anal., 69-2479
Trachybasalt, *Nevada,* anal., 69-2479 ; *New Zealand,* geochemistry, anal., 69-1308
Trachyphonolite, *Sardinia,* alteration products, X-ray, anal., 69-1691
Trachyte, age by Ar/Ar method, 69-24 ; average Au in, 69-3102 ; Sr & Ba in phenocrysts & groundmass, 69-2153 ; *Antarctica,* anorthoclase, age, 69-2509, petrology, anal., 69-712 ; *Cocos Islands,* comp., age, petrography, palaeomagnetism, 69-2452 ; *France,* in massif, magnetism, 69-3367 ; *Italy,* haüyne-, petrography, 69-2437 ; *Nevada,* anal., tr. elements, 69-2816 ; *Nigeria,* inclusions in, 69-3456 ; *Polynesia,* age, 69-17 ; *Siberia,* Nb & Ta distribution, 69-379 ; *Sudan,* 69-3404
Transbaikal(ia), Siberia v. Russian SFSR
Transbaykal = Transbaikal
Transition metals, structural chem., 69-1946
Transmission factors, of crystals, calculation, 69-929
Trans-Pecos v. Texas
Transvaal v. South Africa
Transylvania v. Romania
Trap rocks, *Siberia,* age, 69-687, 2733, 2734, anal., 69-687, Fe oxidation, intrusive & effusive, 69-683
Tras-os-Montes v. Portugal
Traversella, Torino v. Italy
Travertine, *Colorado,* origin, 69-3522 ; *Germany,* anal., formation conditions, 69-3150
Treak Cliff, Derbyshire v. England
Treamble, Cornwall v. England
Trechmannite, structure, 69-167 ; synthetic, X-ray, opt., 69-292
Trégastel, Côtes-du-Nord v. France
Tregonning, Cornwall v. England
Trélazé v. France
Tremearne, Porthleven v. Cornwall
Tremolite, equilibrium of formation, 69-1212 ; heat treated, 1R, 69-522 ; heavy liquid separation, 69-832 ; synthesis, lowest formation *T*, 69-304
— -actinolite, *Franklin,* anal., X-ray, sp. gr., opt., 69-528
— asbestos, *Moravia,* in serpentinite, origin, anal., sp. gr., opt., X-ray, d.t.a., t.g.a., 69-524
Trentino v. Italy
Trento v. Italy
Trevorite, similar to synthetic spinel ferrite, 69-831
Tridymite, 69-1465 ; high, from Steinbach meteorite, crystal structure, 69-153 ; *Italy,* nodules in basalt, anal., X-ray, origin, 69-1576 ; *Lipari Is.,* -celadonite-cristobalite paragenesis, 69-1690 ; *Moravia,* origin of vermicular texture, opt., spectrography, X-ray, d.t.a., t.g.a., 69-543
Trinity Co. v. California
Triplite, *Colorado,* structure, 69-1080
Triploidite, structure, 69-1080 ; *Connecticut,* structure, 69-1081
Tripoli v. tripolite
Tripolite, pore structure, 69-834 ; porosity, 69-2528
Tripuhyite, *Algeria,* Mössbauer spectra, formula, 69-2377
Tristan da Cunha v. Atlantic Ocean
Tri-State mining district v. USA
Tritium, *Lipari Is.,* in fumaroles, 69-1363
Trivero, Val Sessera v. Italy
Troctolite, *Brazil,* pre-metamorphism, 69-2486
Troilite, heat & free energy of formation, 69-2050 ; 2 types in chondrites, 69-3182 ; *Siberia,* in vein ores, X-ray, 69-3325 ; *Siberian platform,* in Cu-Ni ores, H., 69-3595
Trois-Épis, Haut-Rhin v. France
Troms v. Norway
Trona, *Chad,* in salt deposits, 69-1770 ; *Wyoming,* 69-1145
— -opal stalactites, 69-1204
Trondhjem v. Norway
Trondhjemite, *Idaho,* in gneissic complexes, 69-2471 ; *Norway,* metamorphosed keratophyric lava, 69-1093
Troodos-Kellaki v. Cyprus
Trotter dump, Franklin v. New Jersey
Truscottite, stability, 69-303
Tsaratanana v. Malagasy Republic
Tschermakite, *Japan,* in hornblende, 69-2282
Tseya, Caucasus v. Russian SFSR
Tsilaisite, synthesis, sp. gr., opt., X-ray, 69-2127
Tufa, *Germany,* calcareous, comp., mineralogy, petrology, 69-2513
Tuffaceous rocks, *California,* zeolites in, 69-2319
Tuffs, comp. & viscosity as in coal ash, 69-2409 ; zeolitic, density & porosity, 69-1846 ; zeolitic, ion-exchange capacity, 69-1847 ; *Azerbaijan,* in molasse deposits, 69-3501 ; *California,* altered, silicate minerals in, 69-788, anal., zeolitic authigenesis, 69-2554, siliceous in conglomerate, anal., 69-2548 ; *England,* welded, in boreholes, 69-1673 ; *France,* potassic, 69-656, with spilites & keratophyres, 69-2419 ; *Germany,* keratophyric, 69-2444 ; *Hawaii,* anal., 69-2406, palagonite, anal., 69-2406, xenoliths in, 69-1665 ; *Iceland,* glassy, palagonitization, 69-1653 ; *Italy,* petrography, chem., X-ray, d.t.a., 69-1578, recent calcareous, anal., X-ray, 69-3498 ; *Morocco,* age, 69-1798, 2711 ; *Nevada,* welded, anal., 69-2406 ; *Oregon,* laminar flow in, anal., 69-3479 ; *Poland,* in shales, petrography, anal., 69-1584 ; *Shetland,* age, 69-909 ; *Soviet Far East,* proof of hydrothermal alteration, 69-2566 ; *Utah,* Be & F in mineralized, 69-2158, Li & Be in rhyolitic, 69-2156 ; *Vietnam,* petrography, xenoliths in, 69-694, rhyolitic, anal., 69-2423
'Tuffsites,' *India,* in pebble dyke, 69-3580
Tuim, Siberia v. Russian SFSR
Tuléar v. Malagasy Republic
Tulghes v. Romania
Tungstates, energetic properties, geochemical separation, solubility products, 69-1253
Tungsten, assay, 69-60 ; distribution in lignite seam, 69-2186 ; gravimetric estimation in ores & minerals, 69-952 ; in pyrochlore, 69-2378 ; *Black Sea,* in Fe-Mn concretions, 69-3134, in sediments, 69-1316 ; *Central Asia,* in alkaline lake waters, 69-2207 ; *Colorado,* in greisen, 69-1263 ; *Greece,* origin & age, 69-204 ; *Massif Central,* in granitic rocks, 69-657 ; *Morocco,* in metamorphosed limestone, 69-199 ; *Nevada,* anomalous concentration, 69-265 ; *Romania,* 69-3390 ; *Spain,*

Tungsten (*contd.*)
69-3373 ; *Transbaikalia,* in granitic rocks, 69-2172
— ore, determination of Sn & As in, 69-1873 ; formation in self-activating zones, 69-2942 ; *India,* supergene alteration, 69-2987 ; *Istanbul,* origin & age, 69-204 ; *Pyrenees,* 69-2010
— -Sn ore, *Erzgebirge,* at tops of granite stocks, origin, 69-1110, 1111 ; *Portugal,* paragenesis, 69-2011
Tunguska, Siberia v. Russian SFSR
Tunisia, comp. of interstitial water in clays, 69-2873 ; Jurassic marls & limestones, 69-3117 ; *Ain Nouba,* Pb-Zn ores, 69-1108 ; *Djebel Hamra,* Pb-Zn ores, 69-1108 ; *Nefza,* dawsonite, 69-2667 ; *Sakiet Sidi, Youssef,* tunisite, 69-2389
Tunisite, *Tunisia,* in hydrothermal veins, opt., X-ray, d.t.a., IR, 69-2389
Tunji, Garhwal v. India
Turkey, Fe ore industry, review, 69-2967 ; *Asmaca, Alanya,* corundum & diaspore in bauxite, 69-3528 ; *Istanbul,* Sb-W-Hg ore deposits, 69-204 ; *Kizil Dagh, Hatay,* basic-ultrabasic massif, 69-2495 ; *Mendérès,* basement rocks, 69-798 ; *Seydisehir,* bauxite, 69-774 ; *Soganliyürük,* todorokite, 69-1511 ; *Tuz Gölü, Anatolia,* recent huntite, dolomite, magnesite, polyhalite, 69-1768
Turkmen SSR, *Kara-Bogaz,* age of pre-Mesozoic rocks, 69-2735 ; *Kara-Kum,* age of pre-Mesozoic rocks, 69-2735, basaltic rocks, 69-2457 ; *Krasnovodsk,* age of pre-Mesozoic rocks, 69-2735
Turquoise, associated legends, 69-333 ; *Nevada,* production, & mining history, 69-1243
Tuscany v. Italy
Tuva, Siberia v. Russian SFSR
Tuz Gölü, Anatolia v. Turkey
Tweed shield volcano, New South Wales & Queensland v. Australia
Twinning, artificial, in synthetic quartz, 69-2617 ; Brazil-twin boundaries in quartz, opt., 69-3602 ; diamond, micromorphology, 69-828 ; hemihedral of dolomite, misorientation, X-ray, 69-3600 ; in cordierite, 69-3225, 3226 ; in humite minerals, 69-2254 ; in lamellar quartz, Brazil, origin, 69-542 ; in pigeonite, 69-3238 ; of perthitic albite in microcline, 69-1470 ; of quartz, effect of twin boundaries on growth, 69-3601 ; *Italy,* of plagioclase, 69-2316 ; *Ivrea zone,* primary & secondary in plagioclase, 69-3289 ; *Norway,* albite lamellae width, 69-3286
Twinnite, *Ontario,* new mineral, anal., X-ray, VHN, 69-2384
Tyamyr v. USSR
Tychite, *California,* in Quaternary deposits, 39-2538, X-ray, 69-2361
Tycho v. Moon
Tynagh, Galway v. Ireland
Tyretskite, formula, similar to strontiohilgardite-1Tc, 69-2366
Tyrol v. Austria
Tyrone v. Ireland
Tyrrhenian Sea v. Mediterranean Sea
Tysfjord v. Norway

Udachnaya-Vostochnaya, Siberia v. Russian SFSR
Udachnaya-Zapadnaya, Siberia v. Russian SFSR
Udaipur, Rajasthan v. India
Udzha river, Siberia v. Russian SFSR
Uganda, *Bukusu,* Cu anomalies, 69-3164 ; *Moroto mt.,* alkaline rocks, 69-2496
Ugusu v. Japan
Ukrainian shield v. Ukrainian SSR
Ukrainian SSR, alkali metals in salt deposits, 69-412 ; biotite, 69-1459 ; deuterium in waters, 69-430 ; Pb isotopes in waters, 69-430 ; *Azov,* garnet, 69-1410 ; *Bantyshevo, Donets basin,* albitite, 69-1585 ; *Bazavluck structure,* biotites, 69-1460 ; *Berda river,* biotites, 69-1458 ; *Beregovo,* 69-1766 ; *Bug basin,* enderbites, 69-2592 ; *Carpathians,* garnet, 69-1416 ; *Crimean mts.,* pseudoxenoliths, origin of stock, 69-2494 ; *Dnieper district,* anthophyllite, 69-1440 ; *Dnieper-Donets basin,* kaolinite, 69-1014 ; *Donbas,* K in evaporites, 69-2209, siliceous concretions in coals, origin, 69-785 ; *Donets basin,* FeS_2 with coal, 69-1340, Hg deposits, 69-875, 1128, kaolinite, 69-1014, muscovitic hydromica, 69-2865, Pb isotopes in galena, 69-460, whewellite, 69-875 ; *Karadag, Crimea,* mordenite, 69-1477 ; *Konsko-Yalynskaya depression, Azov,* ferrosilicon, 69-1767 ; *Korosten,* ilmenites, 69-1266 ; *Krasnodon,* dickite, 62-1012 ; *Krivoy Rog,* metamorphic rocks, 69-521, mineralogy of slates, 69-1462 ; *Nagolny ridge, Donets basin,* Hg in rocks & soils, 69-1389 ; *Ukrainian shield,* cassiterite, 69-3318 ; *Volynia,* inclusions in quartz, 69-1298, 1299 ; *Yanysharsk Bay, Crimea,* analcite, 69-3299
Ulefoss v. Norway
Ulexite, stability field, 69-2094 ; *California,* in evaporites, 69-1324
Ulindakonda, Andhra Pradesh v. India
Ulkansk, Siberia v. Russian SFSR
Ullmannite, isomorphous substitution in synthetic, 69-3019 ; X-ray, opt. anisotropy, thermal stability, 69-1494
Ultrabasic rocks, enriched in radiogenic Ar, 69-2738 ; heat of cooling & crystallization, 69-1744 ; K/Ar dating of old, 69-2738 ; sulphurization of, 69-1305 ; *Assynt,* origin, 69-1646 ; *Finland,* chromite ore in layered, 69-1996 ; *Germany,* metamorphosed, anal., 69-3564 ; *Greece,* weathering, trace elements, 69-2192 ; *Greenland,* granular, anal., 69-3449 ; *India,* 69-3469, origin of greenschist in, 69-3573 ; *Italian Alps,* 69-810 ; *Italy,* itinerary across complex, 69-1762 ; *Japan,* petrography, mineralogy, 69-2464 ; *Malawi,* petrography, anal., 69-3407 ; *Pyrénées,* opaque minerals in, TiO_2 distribution in, 69-648 ; *Siberia,* inclusions in kimberlite, age, 69-1817 ; *Skye,* xenolithic, in dykes, anal., petrography, origin, 69-2414 ; *Spain,* petrography, genesis, anal., 69-1572 ; *Turkey,* 69-2495 ; *Ural mts.,* eclogitization, 69-817
Ultramafic rocks, age of xenoliths in, 69-2741 ; new normative minerals, 69-2402 ; orogenotypes, facies of, 69-669 ; sepiolite from chemical weathering of, 69-3054 ; *Auckland,* nodules, chem., opt., X-ray, 69-3199 ; *Australia,* layered, petrology of, 69-698 ; *Azerbaijan,* geochemistry of Ni & Co, 69-373 ; *California,* anal., 69-3202 ; *India,* titania in, 69-3101 ; *Italy,* 69-665, 668, 2435, facies of orogenotypes, 69-669 ; *North Carolina,* K, Rb, Sr & Sr isotopes in, 69-3100 ; *South Australia,* Ni in ochre from weathered, 69-2964
Ultramylonite, *France,* anal., X-ray, 69-2580
Ulvöspinel, from titanomagnetite after etching, 69-2332
Umangite, *Czechoslovakia,* 69-871
Umba valley v. Tanzania
Umra, Rajasthan v. India
Umrer coalfield, Maharashtra v. India
Unaweep canyon v. Colorado
Uncompahgre, San Juan mts. v. Colorado
Union Bridge v. Maryland
Union of Soviet Socialist Republics, Ar isotopes in hydrocarbon gases, 69-448 ; Be mineralization, 69-1139 ; clay mineralogy & ceramic permeability, 69-994 ; clay minerals studies, 69-1921 ; crystallography in, 69-1944, 1945 ; deuterium in waters, 69-456 ; extrusive rocks, 60-2454 ; hydrothermal deposits, 69-1921 ; K feldspars, 69-3279 ; ore deposits, classification, 69-203 ; Pb isotopes in natural waters, 69-431 ; pyrochlore, 69-2378 ; tectonics & *Kama-Kinel trough,* 69-2524 ; *Allacechenka,* N sulphide ore deposit, 69-1090 ; *Aral Sea* sediments, 69-1311 ; *Azov,* anthophyllite, 69-1440, chromian muscovite, 69-53 zircon in granitoids, 69-2256 ; *Azov Sea* Mo in sea-water, 69-429, Pb isotope 69-431, Ra in, 69-2201, sphene, 69-1418 ; *Belozerka,* baryte, 69-2355 ; *Berezovs* donbassite, 69-1050, fornacite, vauquelinite, 69-1086; *Bezep, Greater Caucasus,* cinnabar, datolite, 69-2353 ; *Black Sea* Fe-Mn concretions, 69-3134, Mo in sediments, 69-1315, Ra in, 69-220 sediments, 69-1311, W in sediment 69-1316 ; *Caspian Sea,* sediment 69-1311 ; *Chatkal mts., Soviet Central Asia,* Bi ores, 69-223, mineralizatio 69-2941 ; *Chatkal range, Tien-Shan* mineralization, 69-2944 ; *Chibargat Agata, Chatkal'sk ridge, Tien-Shan,* ne vein hydrothermal metamorphism fluorite, 69-793 ; *Dniester region,* F i ground–water, 69-2205 ; *Gissar-Karateg region, Soviet Central Asia,* age of pr Mesozoic rocks, 69-2735 ; *Guissar,* Be i granitoids, 69-1284 ; *Il'men' mts.,* age pegmatites, 69-914 ; *Kalbin rang* ixiolite, wodginite, 69-1485 ; *Kanima sur,* mineralized sandstones, 69-3092 *Karamazars,* galena, 69-3092 ; *Ke massif,* geochemistry, 69-349 ; *Khov Aksu,* apatite in skarn, 69-2922 ; *Kite Ladoga.* Sn deposit, 69-1113 ; *Kuram mts., Soviet Central Asia,* Bi ores, 69-22 mineralization, 69-2941 ; *Lugansk regio* radioactive springs, 69-1357 ; *Maritim region,* igneous activity, 69-3566 *Mednorudyansk,* asperolite, 69-2302 *Nagolnaja Tarasovka,* donbassite, 69-105 *Pechenga,* Ni sulphide ore, 69-1090 *Perevezevka,* baryte, 69-2355 ; *Rosto* radioactive springs, 69-1357 ; *S. Caspia depression,* gases of mud volcanoe 69-1371 ; *Tien-Shan,* B & Cs in volcan rocks, 69-367, Be & F in syenites, Be i intrusives, 69-361, tillite, 69-3398 *Tyamyr,* thomsonite, 69-3300 ; *Upp Kama,* Rb in sylvine & carnallite, 69-414 *Zeravshan-Gissar mts.,* galena, 69-3092
— — — — *v. also Armenian SSR ; Azerbaijan SSR ; Belorussian SSR ; Estonian SSR ; Georgian SSR ; Kazak SSR ; Kirgizian SSR ; Latvian SSR ; Moldavian SSR ; Tadzhik SSR ; Turkmen SSR ; Ukranian SSR ; Uzbe SSR*
United States, allanite, 69-1425 ; A occurrence & production, 69-1994 ; A supergene migration, 69-3155 ; chevkinit 69-1425 ; continental shelf sediment 69-2551, 3508 ; Mn in igneous rock

TED STATES (*contd.*)
9-1294 ; perrierite, 69-1425 ; Trans-daho discontinuity, 69-1553 ; U deposits n sandstone, 69-2006 ; Uravan mineral elt, 69-2008 ; *Appalachians,* bauxite, 9-2194, sandstone, 69-2513, sphalerite, 9-2339 ; *Great Plains,* Cd in shales, 9-2177, sodium sulphate deposits, 9-2990 ; *Gulf of Maine,* Cu, Zn, Ni in ea-water, 69-2200 ; *Rocky mts.,* basalts, 9-2498 ; *Tri-State mining district,* Pb sotopes in zoned galena, 69-2143 ; *Upper Mississippi valley,* carbonaceous shale, Zn-Pb ore, 69-2142 ; *western,* Be & F in olcanic glasses, 69-2159 ; *Yellowstone Plateau,* basalt, rhyolite, 69-2472
— *v. also* entries for individual states
its, terms proposed for 10^9 yrs, 10^9 light rs, 10^9 °K, 10^9 eV, 69-886
iversal stage, computer programme for rocessing readings, 69-1829
named minerals, *Czechoslovakia,* tructure, 69-1960
— *v. also* new minerals, unnamed
st, Shetland v. Scotland
terengadin v. Switzerland
P. = Uttar Pradesh
per Chulitna district v. Alaska
per Kama v. USSR
per Mississippi valley v. USA
per Rhine v. Germany
als mts. v. Russian SFSR
lborite, *Urals,* d.t.a. curve like vimsite, 9-2388
als v. Russian SFSR
al-Volga region v. Russian SFSR
nninite, Ar, He, Kr & Xe in, 69-1372 ; dentification by γ-ray spectrum, 69-854 ; *rizona,* 69-2980 ; *Colorado,* deposited rom ground-water, 69-2007 ; *France,* in ranite, 69-2171, 2421 ; *New South Wales,* n Bi-Mo ores, 69-225 ; *Orange Free State,* auses blasting haloes, 69-3438 ; *South frica,* origin, 69-1130 ; *Utah,* cell imensions, age, 69-1118
-thorianite series, *France,* inclusions in ranite, 69-3097
nium, anal. by γ-ray spectrometry, 9-957 ; as by-product of phosphate rock monazite processing, 69-220 ; condi-ions for concentration in peat, 69-403 ; etection & assessment of low grade eposits, 69-68 ; determination by athode ray polarography, 69-2812 ; etermination by mobile γ-ray spectro-neter, 69-2813 ; determination in water y particle track etching, 69-958 ; etermination of isotopes, 69-45 ; geo-hemical behaviour in rocks, 69-1819 ; ydrolysis with *T* increase, 69-440 ; n baryte, 69-2173 ; in G–2, 69-1378; in arnet, 69-386 ; in granitic rocks, 69-386 ; n GSP–1, 69-1376; in igneous rocks by -spectrometry, 69-388 ; in lava & henocryst, 69-387 ; in phosphate rocks, ossible radiation hazard, 69-889 ; in tone meteorites, 69-487 ; interpretation f anomalies with isotope ratio, 69-399 ; eutron activation anal., 69-73, 968 ; rovenance & accumulation in sediments, 9-399 ; reserves & resources, 69-220 ; *Alaska,* suggested prospecting area, 9-197 ; *Australia,* in granulite terranes, 9-1344 ; *Black Sea,* in water, 69-3154 ; *ircum-Pacific province,* in volcanic rocks, 9-2165 ; *Colorado,* in soils, 69-3129, in J-V ore bodies, 69-1119 ; *France,* -Bi-Cu-e paragenesis, 69-2979, in inclusions in ranite, 69-3097, in granite, 69-2171 ; *Germany,* two zones of mineralization, 69-221 ; *India,* geochemistry in mine, 69-3085 ; *Italy,* in alkali-potassic volcanoes, 69-3461 ; *Japan,* anal. in igneous rocks, 69-1892 ; *New Mexico,* in uranophane, 69-2480 ; *Norway,* occurrences, list of mineral species with >0.1%, 69-222 ; *Pennsylvania,* variation in diabase-granophyre, 69-382 ; *Rajasthan,* in soils, 69-3121 ; *Sicily,* in phosphate deposits, anal., 69-274 ; *Tasmania,* variation in diabase-granophyre, 69-382 ; *Texas,* in alkaline rocks, 69-2166, in granite, 69-1625 ; *Tunisia,* in marls & limestones, 69-3117 ; *USSR,* in spring water, 69-1357 ; *Virginia,* in alkaline rocks, 69-2166 ; *Washington,* in monazite, 69-2367 ; *Wyoming,* distribution in U deposits, 69-1269
— compounds, $K_2Ca_3(UO_2)_2(CO_3)_6.9–10H_2O$, X-ray, 69-2079 ; uranium black, 69-1271
— deposits, *New Mexico,* localization & control, 69-2947
— isotopes, oxidation rates in pitchblende and uranium black, 69-1271 ; ^{238}U fission tracks in biotite, 69-1822 ; *Wyoming,* fractionation in sandstone, 69-2180
—minerals, determination of radioactive equilibrium, 69-2814 ; scintillation counter for study of, 69-1888 ; *France,* 69-2979 ; *Germany,* 69-2993, trace elements in, 69-2148
— ore, deposition controlled by graphitization, 69-1270 ; *Arizona,* 69-2980 ; *Colorado,* associated with altered sand, 69-2007, localized by sedimentation, 69-2008 ; *Finland,* sedimentary, 69-1996 ; *India,* assay results, 69-2981, radioactive disequilibrium, 69-3086 ; *New Mexico,* 69-1777, effect of Ra migration on age determination, 69-1813 ; *USA,* epigenetic in sandstone, 69-2006 ; *Utah,* localized by sedimentation, 69-2008 ; *Wyoming,* nature of ore-bearing solution, 69-1269, roll-type, 69-1779
— -V ore, *Colorado,* U, V & Se in, 69-1119
Uranocircite, *France,* 69-2979
Uranophane, *New Mexico,* 69-2480
Uranothorianite, *South Africa,* occurrence and reserves, 69-2940
Uranotile, α-, *France,* 69-2979
Uravan mineral belt, *United States,* 69-2008
URUGUAY, *Rio de la Plata,* sediments, 69-3512
Urup Is., Soviet Far East v. Russian SFSR
USSR v. Union of Soviet Socialist Republics
Ustarasaĭ v. Uzbek SSR
Ust'-Balyk, Siberia v. Russian SFSR
Ust'-Teremki, Siberia v. Russian SFSR
UTAH, bentonite deposit, 69-1926 ; Hg in Navajo Sandstone, 69-3132 ; metals in black shales, 69-2175 ; U-V ores localized by sedimentation, 69-2008 ; *Bonneville Salt Flats,* brine, 69-1358 ; *Burgin mine, East Tintic,* Ag in galena and cerussite, 69-2976 ; *Drum mts., Juab Co.,* O and C isotope ratios of carbonate rocks, 69-2149 ; *Fairfield,* Sc in variscite and crandallite, 69-600, sterrettite, 69-600; *Fuemrole mine, Temple mt.,* meta-aluminite, 69-619 ; *Kane Springs canyon,* U mineralization, 69-1118, uraninite, andersonite, mica polymorphs, 69-1118 ; *North Lily mine, East Tintic,* billingsleyite, 69-2383 ; *Ohio, Maryvale,* Bi and Sn minerals, Ag, Au, 69-2019 ; *Paradox basin, Grand Co.,* braitschite, 69-615 ; *Rocky range, Beaver Co.,* geochemical prospecting, 69-2220 ; *Silver Reef,* Ag, Hg, 69-1121 ; *Spor mt., Western Juab Co.,* Be and F in mineralized tuff, 69-2158, Be belt, 69-1140, Li and Be in tuff, 69-2156 ; *Stockton,* distribution of metals, 69-1120 ; *Topaz mt., Thomas range,* red beryl, 69-512
Uttar Pradesh (U.P.) v. India
Uvalde v. Texas
Uvarovite, synthesis, 69-1209 ; *Orissa,* in chromite ore body, refr. ind., anal., 69-541 ; *Quebec,* X-ray, unit cell, anal., sp.gr., 69-878
Uzbekistan v. Uzbek SSR
UZBEK SSR, geochemistry of Re and Mo in sulphides, 69-405 ; *Almalyk,* Cu ore, 69-2969, Pt group elements in ores, 69-2147 ; *Bukhara,* age of pre-Mesozoic rocks, 69-2735 ; *Chatkal range,* volcanic-plutonic complexes, 69-689 ; *Fergana,* Cretaceous sediments, 69-2529 ; *Karamazar,* Cu-Bi ores, 69-224 ; *Kurama range,* Cu-Bi ores, 69-263 ; *Kyzyl-Kum,* age of pre-Mesozoic rocks, 69-2735 ; *Ustarasaĭ,* Pb-bearing josëite, 69-569

Val Chisone, Massiccio Dora Maira v. Italy
Val d'Agno v. Italy
Val d'Aosta v. Italy
Val di Noto, Sicily v. Italy
Val d'Ossola v. Italy
Vale da Ermida v. Portugal
Valentinite, *Massif Central,* 69-2959
Val Gardonè, Predazzo v. Italy
Valle Anzasca, Novara v. Italy
Valle Cannobina v. Italy
Valle del Chiampo v. Italy
Valle del Visone v. Italy
Valle di Vizze, Alto Adige v. Italy
Valle Grosina, Sondrio v. Italy
Valle Onsernone v. Italy
Valleriite, *Rajasthan,* in Cu ore with mackinawite, 69-3626 ; *South Africa,* chem. and structure, 69-1061 ; *Transvaal,* 69-2986, in carbonatite, anal., 69-2346
Valles caldera v. New Mexico
Valle Strona, Novara v. Italy
Valley Co. v. Idaho
Valley Ford v. California
Valley of Ten Thousand Smokes v. Alaska
Vallon de Merlier, Alpes-Maritimes v. France
Valmaillargues v. France
Val Mastallone v. Italy
Val Scalotta, Predazzo v. Italy
Valsesia, Vercelli v. Italy
Val Sessera, Vercelli v. Italy
Valsugana v. Italy
Val Verzasca, Tessin Alps v. Switzerland
Valvignères v. France
Vanadinite, IR spectrum, 69-1078
Vanadium, correlation with ash in coal, 69-404 ; determination, 69-47 ; in andesites, 69-2168 ; in carbonaceous schists, 69-1345 ; in igneous rocks, 69-371 ; in synthetic tourmaline, 69-340 ; in topaz, influence on colour, 69-3216 ; photometric determination in magnetite, ilmenite, chromite, igneous rocks, 69-1854 ; salinity indicator in clays, 69-395 ; V/Co/Ni ratios, geochemical trends, 69-370 ; with Fe and Ti in pyroxenites, 69-369 ; *Black Sea,* in Fe-Mn concretions, 69-3134 ; *Colorado,* in U-V ore bodies, 69-1119 ; *Czechoslovakia,* in Fe ores, 69-1268 ; *Europe,* in Zechstein deposits, 69-415 ; *Finland,* in chromite, 69-2333 ; *Illinois,* in oil and shale, 69-1366 ; *New Zealand,* in augites, hornblendes and hypersthenes, 69-3083 ; *Rajasthan,* in soils, 69-3121 ; *Romania,* in volcanites,

Vanadium (*contd.*)
69-1307 ; *St. Kitts,* in lavas, 69-724 ; *Siberia,* in magnetite deposits, 69-355 ; *Sicily,* in phosphate deposits, anal., 69-274 ; *Tanzania,* gives colour to zoisite, 69-3066 ; *Urals,* in bituminous shales, 69-3133 ; *USA,* in black shales, 69-2175 ; *Western Australia,* in magnetite gabbro, 69-787
— compounds, $NaVMoO_6$, structure, 69-1068
— minerals, *Kazakh SSR,* V-As germanite, in ores, opt., H., anal., X-ray, 69-613 ; *South Africa,* occurrence and reserves, 69-2940
— ores, *Colorado,* localized by sedimentation, 69-2008 ; *Utah,* localized by sedimentation, 69-2008
— -U ore, *Colorado,* U, V and Se in, 69-1119
Van Bemmelen hydrate, by treatment of limonite with NaOH, 69-585
Van Rhynsdorp, Cape Province v. South Africa
Vanthoffite, *New Mexico,* in evaporite, anal., sp.gr., opt., X-ray, 69-1508
Var v. France
Varallo, Vercelli v. Italy
Varberg v. Sweden
Variscite, IR, 69-2638 ; *Utah,* in phosphate deposit, Sc in, 69-600
Varved sediments, *Ontario,* 69-3123
Vaterite, precipitation from sea-water, 69-1323 ; structure, 69-2918 ; transformation to calcite during grinding, 69-2074 ; transformation to calcite in Na_2CO_3 solution, 69-2075
Vatukoula Fiji v. Pacific Ocean
Vaugnerite, *France,* origin, 69-2417
Vauquelinite, *USSR,* structure, 69-1086
Vauxite, comp., structure, 69-188
Veatchite, *California,* structure, 69-2920
Vector variation diagram, volcanic rock series, method of derivation, 69-2403
Veenite, *Ontario,* in marble, mineralogy, X-ray, 69-1534
Velay v. France
Velence mts. v. Hungary
Vendée v. France
Venedig, Hohe Tauern v. Austria
Venediger v. Austria
VENEZUELA, diamond mining, 69-330
Vercelli v. Italy
Vérignon, Var v. France
Verkhnekamsk v. Russian SFSR
Vermiculite, charge balance between ions, 69-2301 ; competitive adsorption isotherms, divalent organic cations, 69-96 ; dimethyldioctadecyl ammonium derivatives, 69-2831 ; hydroxyl interlayers in, 69-1912 ; *England,* in Chalk, 69-109 ; *Europe,* in Chalk, 69-109 ; *Japan,* Al-, from altered biotite, X-ray, anal., sp.gr., 69-2294 ; *Oregon,* in andesite, 69-2481 ; *Russian SFSR,* from phlogopite, 69-536 ; *Shetland Is.,* Na-, anal., X-ray, 69-2855
VERMONT, basement rocks, 69-798 ; dolomite marble, goethite, vesuvianite, 69-1246
Vertisols, montmorillonite in, 69-1936
Vestfold hills v. Antarctica
Vesuvianite (idocrase), B isomorphism in, 69-3084 ; *Italy,* X-ray, 69-3214 ; *Siberia,* zoned, anal., opt., 69-3213 ; *Vermont,* 69-1246
Vesuvius v. Italy
Věžná, Moravia v. Czechoslovakia
Viana del Bollo, Galicia v. Spain
Viborgites, *Finland,* O isotopes in feldspars, 69-1295
Vicenza v. Italy
Vico, Latium v. Italy
Victoria v. Australia
Victoria Land v. Antarctica
Vieille Aure, Hautes Pyrénées v. France
VIETNAM, weathering of basic rocks, 69-2875 ; *Archipel des Pirates,* rhyodacite, tuff, 69-3423 ; *Cho Dien,* Pb-Zn ores with Cd and Ga, 69-237 ; *Hon Khoai,* andesite, granite, 69-3425 ; *Hon Nghê Is.,* geology, 69-3422, ignimbrite, 69-3423 ; *Hon Tre,* quartz monzonite, 69-3424 ; *Hon Trung Long Is.,* microgranite, P enriched by guano, 69-364 ; *Tan Thanh,* xenoliths in mineralized tuffs, 69-694
Vignola, Valsugana v. Italy
Vihanti v. Finland
Vila Apacheta v. Bolivia
Villalba, Lugo v. Spain
Villamaninite, redefined, 69-2343 ; *Spain,* in Cu, Ni, Co deposits, reflectivity, X-ray, VHN, 69-2343
Villa Martin, Potosi v. Bolivia
Villeroy, Hérault v. France
Vimsite, *Urals,* in skarn, anal., X-ray, d.t.a., formula, 69-2388
Vinogradovite, structure, 69-1986
Violarite, *India,* 69-2968
Virgin no. 3 mine, Montrose Co. v. Colorado
VIRGINIA, monazite deposits, 69-200 ; *Amelia,* pegmatites, 69-879 ; *Amherst Co.,* barian-florencite, pegmatite, rhabdophane, weinschenkite, 69-1514 ; *Augusta Co.,* Th and U in alkaline rocks, 69-2166 ; *Blue Ridge,* greenstone, 69-2477 ; *Irish creek,* Be in Sn deposits, 69-2145 ; *Shenandoah National Park,* volcanic rocks, 69-3435
Visakhapatnam, Andhra Pradesh v. India
Viseu v. Portugal
Visonta v. Hungary
Viti Levu Is., Fiji Islands v. Pacific Ocean
Vitim, Siberia v. Russian SFSR
Vitim plateau, Siberia v. Russian SFSR
Vivianite, IR, 69-2638 ; magnetic symmetry, 69-187 ; opt. absorption spectra, structure, colour, pleochroism, 69-1952 ; polarized opt. absorption spectra, 69-846 ; *France,* in pegmatite, opt., 69-869
Voelckerite, does not exist, 69-2371
Vogelsberg, Hesse v. Germany
Vogesite, *Lake District,* 69-2415
Volborthite, *Argentina,* with malachite and carnotite, opt., X-ray, physical data, 69-885
Volcanic arcs, K_2O/Na_2O ratios, 69-358
— ash, soil stabilization, 69-1917 ; *Faroes,* age of horizons in peat bog, 69-1808 ; *France,* origin of tonsteins, 69-769, 770 ; *Massif Central,* forming andosoil, 69-114 ; *Norway,* age of horizons in peat bog, 69-1807 ; *Oregon,* mineral stability sequence in, 69-2555
v. also tephra
— complex, *Nevada,* 69-2406 ; *Siberia,* spectrographic anal., 69-1306
— emanations, origin of N, 69-344 ; *Surtsey,* comp. of smoke clouds, 69-1650
— gas, *Caucasus,* Ar in, 69-445 ; *Kamchatka,* Ar in, 69-445 ; *Kilauea,* acid, effect on basaltic pumice, anal. of condensate, 69-1662 ; *Kuriles,* Ar in, 69-445 ; *Surtsey,* anal., 69-758, 759, 760
— glass, alteration of, 69-3110 ; refr. ind. and Fe^{2+}/Fe^{3+} ratio, 69-3056 ; refr. ind. and O fugacity, 69-3056 ; *Alaska,* undevitrified in tuff, 69-2465 ; *Faroes,* in peat bog, refr. ind., grain size, 69-180
Norway, in peat bog, refr. ind., gra
size, 69-1807 ; *Sea of Japan,* in bott
deposits, anal., opt., 69-2460 ; *USA,*
and F in, 69-2159
— necks, structural types and associat
ore desposits, 69-1097
— rocks, age by ionium-U ratio, 69-38
Ba and Sr in phenocrysts and grou
mass, 69-2153 ; cause of magne
stability, 69-1754 ; coexisting amphibo
in, 69-3252 ; derivation of vector var
tion diagrams, 69-2403 ; genetic sequen
X-ray, 69-3439 ; *Alaska,* 1912 erupti
ejecta, 69-2406 ; *Almería,* Cainozo
lithology, 69-661 ; *Angola,* anal.,
3408 ; *Antarctica,* 69-2509 ; *Arizo*
anal., metamorphism of, 69-240
Atlantic Ocean, bottom samples, an
69-2508 ; *Australia,* age, 69-4 ; *Bohem*
anal., norms, 69-2446 ; *Canadian Shie*
Archaean, anal., 69-1552 ; *Can*
Islands, 69-761, petrology, 69-664, ree
eruptives, 69-762 ; *Capri,* petrograp
genesis, 69-2439 ; *Caucasus,* age, 69-38
Chile, andesitic intruded by granit
69-198 ; *China,* anal., feldspar
69-695 ; *circum-Pacific province,* Th a
U in, 69-2165 ; *Colorado,* 69-24
magmatic differentiation in, anal.,
2475 ; *Cook Islands,* petrography,
714 ; *Ethiopia,* comp., 69-677, geolo
69-678 ; *Fiji,* age, 69-7 ; *France,* ac
K_2O in, 69-656, comp., 69-517, eruptic
in massif, 69-649 ; *Germany,* potass
origin, 69-3460 ; *Honshu,* yugawaralite
zeolitic zones, 69-2327 ; *Hungary,* evö
tion, comp., petrochem., 69-1583 ; *Ita*
69-1575, anal., 69-2438, coeval w
monzonites, petrochem., anal., 69-33
petrography, anal., 69-1574, 1577, pot
sic, origin, 69-3460 ; *Japan,* hyd
thermal alteration, 69-1018 ; *Kamchat*
proof of hydrothermal alteration,
2566 ; *Lipari Islands,* altered, opt., X-r
chem., d.t.a., 69-1678 ; *Malagasy Repub*
petrography, 69-1592 ; *Morocco,* detrit
69-1769 ; *Naples,* B and F in, 69-310
Nevada, anal., age, 69-2816 ; *New So*
Wales, age, comp., 69-5, anal., paren
magma, 69-1639, greywacke, metam
phosed, 69-779 ; *New Zealand,* pet
graphy, 69-702, 703, 705, tr. eleme
geochem., 69-3083 ; *Oregon,* petrograp
anal., 69-722 ; *Pacific Ocean,* from s
mounts, anal., tr. elements, 69-160
Pitcairn Is., petrography, 69-715 ; *Pue*
Rico, 69-723, anal., 69-1614 ; *Queensla*
geology, 69-700, petrology, paren
magma, anal., 69-1639 ; *Romania,* an
69-3390 ; *Russian SFSR,* physical a
mechanical properties of pyrite-beari
69-1743 ; *Scotland,* 69-1671 ; *Siber*
biostratigraphy, 69-3475, Nb and
distribution, 69-379, pyritic ores
69-2000 ; *Sicily,* magnetic opaques
lava, 69-763 ; *Spain,* genesis, an
69-1569, geology, tectonics, 69-15
petrography, anal., 69-1567 ; *Sud*
69-3404 ; *Sweden,* basic and rhyolit
69-2411, petrology, anal., 69-241
Switzerland, submarine, lava types,
3371 ; *Tasmania,* petrography, 69-160
Tien-Shan, B and Cs in, 69-367 ; *Uz*
SSR, in complex with plutonics, 69-68
Virginia, mode of eruption, 69-343
Wyoming, coexisting feldspars in, an
69-3430
— springs, O and H isotopes in wat
69-437

canism, acidic, local and regional, 9-3462 ; and descending mantle convective flow, 69-757 ; bimodality of, 69-3459 ; relationships with tectonics, 69-754 ; submarine, associated with sedimentary Hg and Sb desposits, 69-204 ; *Almería*, cycles in Miocene, 69-660 ; *Alpes-Maritimes*, proof of, 69-46 ; *Alps*, post ophiolites, studied from lysch, 69-3372 ; *Argentina*, related mineralization, 69-201 ; *Atlantic Ocean*, 69-2508 ; *California*, 69-2406 ; *Chile*, usion of crust, 69-3437 ; *Cyprus*, 2 series, 69-3374 ; *France*, acid, 69-645, evolution f type, 69-650, sodic, 69-2419 ; *Iceland*, nd ash in Norwegian peat bog, 69-1807 ; *taly*, of Apennine orogeny, 69-2441 ; *Malagasy Republic*, 69-1593, 1594 ; *Massachusetts*, petrology, 69-1611 ; *mid-Atlantic ridge*, 69-1558 ; *Montana*, 69-406 ; *Moon*, 69-898 ; *Nevada*, 69-2406 ; *New Zealand*, andesitic, and depth of seismicity, 69-1657, crustal fusion produces ntermediate magma, 69-749, differentiation of andesitic magma, 69-749 ; *Puerto Rico*, changes during Cretaceous, 69-614 ; *Reunion Is.*, differentiation of phases, 69-2450 ; *St. Helena*, form of nagma chamber, 69-1588 ; *Scotland*, Carboniferous-Permian, history, 69-3364 ; *Sea of Japan*, submarine, several foci, 69-2460 ; *Siberia*, associated pyrite mineralization, 69-2000, carbonate breccia n vent, 69-3532, Precambrian, 69-687 ; *Spain*, cycle of events, 69-662 ; *Sudan*, probably Tertiary, 69-3404 ; *Sweden*, elation to tectonics, 69-2413 ; *Taiwan*, 69-1600 ; *Vosges*, 2 series, anal., 69-2423 ; *Wyoming*, reflected in heavy mineral listribution, 69-2547

canite, *Lipari Is.*, from diagenesis of shes and lapilli, 69-3518 ; *Romania*, Neogene, associated metallogeneses, 69-089, spectrographic anal., 69-1307

canoes, *Antarctica*, pyroclastic, historic, 69-3478 ; *Argentina*, geology, petrology, 69-730 ; *Congo*, anal. of lava, 69-3474 ; *Ethiopia*, history and geology, 69-677 ; *France*, lacustrine, structure, 69-3480 ; *Hawaii*, 69-1659 ; *Iceland*, subaquatic, tructure and products, 69-1653 ; *Italy*, lkali-potassic, tr. elements in, 69-3461, petrography of lavas, 69-2437, succession f events, 69-2438, Rb and K in rocks, 69-1293 ; *Japan*, evolution, ^{14}C dating, 69-764 ; *Kamchatka*, eruption, associated eismic activity, 69-1654, explosive frequency, 69-3477, tectonic position, 69-476 ; *Kilauea*, 69-1658, 1660, 1661, 662, 1663, 1664, 1686, *T* of lava, 1963, 69-2506 ; *Mediterranean Sea*, andesitic lacite, anal., 69-2183 ; *Mount Fuji*, 69-1655 ; *Mount Hakone*, 69-1655 ; *New Zealand*, geology & structure, 69-765, petrography, 69-702, 703 ; *Pacific Ocean*, ubmarine, comp. of basalts, 69-2485 ; *St. Helena*, geochronology, 69-1810 ; *St. Kitts*, petrology, anal., 69-724 ; *Uganda*, origin of alkaline lavas, 69-2495 ; *USSR*, mud, geochemistry of gases, 69-1371

canoclastic rocks, *Puerto Rico*, geology, 69-723

canology, 17 studies, 69-2406

lga river v. Russian SFSR

lga–Don region v. Russian SFSR

lga–Ural v. Russian SFSR

lgograd v. Russian SFSR

lynia v. Ukrainian SSR

Volynskite, *Central Asia*, in Au ore, H., opt., X-ray, 69-262

Vonsenite *v.* paigeite

Voronja, Kola peninsula v. Russian SFSR

Voronezh v. Russian SFSR

Vosges v. France

Vosges mts. v. France

Vrančice v. Czechoslovakia

Vrbaite, *Yugoslavia*, comp., formula, 69-2354

Vrbno and Šternberk-Horní Benešov belt Jeseník mts. v. Czechoslovakia

Vredenburgite, *India*, in Mn ore, comp., anal. recalculation, 69-579

Vulcano Is., Lipari Islands v. Italy

Vulsini, Latium v. Italy

Vulture v. Italy

Vuori-Yarvi v. Russian SFSR

W–1 *v.* standard rocks

Wadeite, *Siberia*, in pseudoleucite rocks, 69-3400

Wagnerite, structure, 69-1080

Waidhaus, Bavaria v. Germany

Waihi, North Is. v. New Zealand

Waimuna Springs, Northern Territory v. Australia

Wairakei, North Is. v. New Zealand

Wairakite, natural and synthetic, X-ray, 69-2324

Wakefield, Quebec v. Canada

WALES, *Severn valley*, geology, 69-1676 ; *South Wales Coalfield*, geology, 69-1675, individual seams, classification, rank, 69-895

—, CAERNARVONSHIRE, *Conway*, illitic clay, 69-85 ; *Snowdonia*, composite sills, 69-732

—, CARMARTHENSHIRE, *Ammanford*, geology, 69-1675 ; *Carmarthen*, geology, 69-1675 ; *Gwendraeth valley*, geology, 69-1675 ; *Worms Head*, geology, 69-1675

—, GLAMORGANSHIRE, *Llantrisant*, celestine, 69-1760

—, MERIONETH, *Moel Goedog*, basaluminite, 69-2357

Wallis v. Switzerland

Wallisite, structure, 69-167 ; *Lengenbach*, anal., 69-2352 ; *Switzerland*, structure, 69-1062

Wallrock alteration, *Finland*, associated with sulphide deposits, review, 69-2935

Waltersburg v. Illinois

Waniguchi, Honshu v. Japan

Warren Co. v. New York

WASHINGTON, *Castle Peak, Pasayten river*, granodiorite age, 69-2718 ; *Coastal range*, ages of rocks, 69-2717 ; *Klickitat river*, andesite, 69-1608 ; *Monument Peak, Pasayten river*, granite, 69-2718 ; *Mount Adams*, andesite, 69-1608 ; *Okanogan Co.*, magnesite deposits, 69-2041 ; *Pasayten river*, plutons, 69-2718 ; *Spokane Co.*, clay deposits in saprolite, 69-2870, Th and U in monazite, 69-2367

Washington Co. v. Rhode Is.

WASHINGTON, D.C., chlorite-talc schist, 69-2611

Washoe Co. v. Nevada

Water, desorption effects on crystal hardness, 69-2621 ; determination in granites by IR, 69-1890 ; determination in minerals, rocks, 69-52 ; dew, analytical data, 69-1352 ; free and combined in aplite, granite and schist, 69-1890 ; gaseous in inclusions, 69-1367 ; H_2O^+ in rocks, IR, 69-2815 ; in belovite, 69-1083 ; influence on metamorphic mineral reactions, 69-2053 ; in tektites, impactites and glass, IR, 69-3198 ; measurement of Po in, 69-1849 ; of ore deposits, Ge in, 69-435 ; of ore deposits, Se in, 69-434 ; oil-field, sulphide determination, 69-2811 ; percolation through perforated plates, 69-1782 ; rain, contains salts from the ocean, 69-1352 ; rapid determination of PO_4 in, 69-1850 ; role in opal, 69-3065 ; salination by rock weathering, 69-2208 ; U and B determination by particle track etching, 69-958 ; *Atlantic Ocean*, in sediments from cores, 69-3596 ; *Caucasus*, Ge in, 69-439 ; *France*, karst, 69-1149 ; *Italy*, comp. of interstitial in clays, 69-2873 ; *Kazakhstan*, deuterium in, 69-430 ; *Kilauea*, in pumice, 69-1664 ; *New Zealand*, from drillholes, Fe, Al and Mn in, 69-442, Ge, Mo, Cu and Zn in, 69-441 ; *North Sea*, comp. of interstitial in clays, 69-2873 ; *Pacific Ocean*, in core sediments, 69-1320, 3596 ; *Pamirs*, Ge in, 69-439 ; *Pennines*, $CaCO_3$ in, flow-through time in limestones, 69-436 ; *Sicily*, comp. of interstitial in clays, 69-2873 ; *Surtsey*, in volcanic gas, anal., 69-760 ; *Sweden*, role in Fe ore metamorphism, 69-1702 ; *Tunisia*, comp. of interstitial in clays, 69-2873 ; *Ukrainian SSR*, deuterium in, 69-430, of evaporite beds, K in, 69-2209 ; *USSR*, deuterium in, origin of, 69-456, Pb isotopes in, 69-431, radioactive, 69-1357 ; *Wyoming*, adsorbed on bentonite, IR, 69-1915

—, ground-, age of, Ar isotopes, 69-447 ; effect of *T* on comp., 69-438 ; solubility of dolomite in, 69-2076 ; *Calcutta*, siderite equilibrium in, 69-3157 ; *Colorado*, uraninite deposited from, 69-2007 ; *Czechoslovakia*, anal., chem. equilibria and zoning in, 69-3153 ; *England*, saline, origin, 69-3143 ; *Germany*, age of resources, 69-1805 ; *Iran*, chem. data, 69-1355 ; *Madras*, in sandstones, geochemistry, 69-3122 ; *Nevada test site*, solution chemistry, 69-2816 ; *Quebec*, flow definition, 69-1356 ; *Siberia*, influence of river-water on comp., 69-2206 ; *USA*, Au migration in, 69-3155 ; *USSR*, F in, 69-2205

—, hot spring, O and H isotopes in, 69-437 ; *Iceland*, anal., 69-2212 ; *Kamchatka*, anal., 69-2212 ; *Kuriles*, Fe, Al and Ti in, 69-3107 ; *New Zealand*, anal., 69-2212 ; *Soviet Far East*, MnO_2 in, 69-1364 ; *Yellowstone National Park*, circulation, 69-2507, 70,000 gallons reservoir, 69-2507

—, lake, *Azov Sea*, Pb isotopes in, 69-431 ; *central Asia*, W in alkaline, 69-2207 ; *Galapagos Is.*, chem., 69-433 ; *Lake Balkash*, Pb isotopes in, 69-431 ; *Lake Chad*, saline, anal., 69-1770 ; *Russian SFSR*, Fe in, 69-2204

—, river, *America*, Li, K, Rb and Cs in, 69-1354 ; *Canada*, comp. 69-2203 ; *Colorado*, anal. for Mo, Pb and Zn, 69-3156 ; *Hungary*, hydrogeochemistry, 69-1362 ; *Ivory Coast*, soluble elements, 69-1353 ; *Kuriles*, Fe, Al and Ti in, 69-3107 ; *Siberia*, influence on comp. of lake ground-waters, 69-2206

—, sea, anal., Th isotopes in, 69-3148 ; baryte and Sr in, 69-3147 ; co-precipitation of cations with $CaCO_3$, 69-1323 ; diagenesis and balance of SiO_2 in, 69-427 ; experimental precipitation of sepiolite from, 69-3054 ; SiO_2 in, 69-3144 ; solubility of apatite in, 69-1190 ; solubility of $BaSO_4$ in, 69-426 ; Sr isotopes in, 69-1349 ; *Azov Sea*, Ra in, 69-2201 ; *Black Sea*, Ra in, 69-2201, U in, 69-3154 ;

Water (*contd.*)
English Channel, solubility of $BaSO_4$ in, 69-426 ; *France*, O isotope ratios during evaporation, 69-1350 ; *Pacific Ocean*, Re in, 69-3149 ; *USA*, Cu, Zn, Ni in, 69-2200
—, spring, *Germany*, anal., 69-3150 ; *Pyrenees*, origin of Na and silica in, 69-3151 ; *Soviet Far East*, Mn minerals in, anal., 69-1364
—, thermal, Ge in carbonated, 69-439 ; *New Zealand*, comp., 69-443 ; *Taupo*, Ge, Mo, Cu and Zn in, 69-441
— vapour, adsorption on lead glass, 69-890
Wavellite, IR, 69-2638 ; *Arkansas*, structure, 69-1079 ; *Florida*, in nodules, 69-2674 ; *St. Austell*, with granite or greisen, 69-2372
Wawa, Ontario v. Canada
Weald v. England
Weardale, Durham v. England
Weathering, distinction from diagenesis, 69-3515 ; implications of irreversibility, 69-3071 ; of Lewisian gneiss during Torridonian, anal., 69-1670 ; salt, in deserts, 69-2691 ; salt from igneous and metamorphic rocks, 69-2208 ; *California*, spheroidal, of limestone and dolomite, 69-1698 ; *Cornwall*, of biotite, anal., Mössbauer, X-ray, 69-2295 ; *France*, of granite, 69-2191 ; *Germany*, lateritic, 69-1934 ; *Iran*, by salt crystal growth, 69-1687 ; *Italy*, of granitoid rocks, anatase authigenesis, 69-2557 ; *Japan*, of biotite, 69-2294 ; *Scotland*, of Lewisian during Torridonian, 69-1670
Webb Township, Ontario v. Canada
Wechsel v. Austria
Wegscheid v. Austria
Wehrlite, *India*, in chalcopyrite, anal., 69-3328
Weilburgite, *Germany*, injected into tuff, anal., 69-2444
Weinschenkite, *Virginia*, in pegmatite, chem., X-ray, 69-1514
Weissenberg goniometer, 69-38
Weissite, *Colorado*, 69-2957
Weitendorf, Steiermark v. Austria
Welinite, structure, 69-1988
Welsh Borderland, Shropshire v. England
Wernerite, *Malagasy Republic*, in intrusive veins, 69-2043
West Elk v. Colorado
West Indies, *Barbados*, airborne dust, 69-1554 ; *Haiti*, magmatic assimilation at marble contact, 69-747, spherulitic pyroxene andesite, 69-2167 ; *Mount Misery, St. Kitts, Leeward Islands*, volcano petrology, 69-724 ; *Soufrière volcano, St. Vincent*, sodic anorthite, 69-3292
— —, Puerto Rico, intrusive rocks, 69-3436 ; volcanism, 69-1614 ; *Aguas Buenas* and *Naranjito quadrangles*, volcanic rocks, volcanoclastic rocks, 69-723
West Kimberley, Western Australia v. Australia
West New Market, Mascot-Jefferson City district v. Tennessee
West Pakistan v. Pakistan
West Sudeten v. Czechoslovakia
Westerly v. Rhode Island
Western Australia v. Australia
Western Juab Co. v. Utah
Westmorland v. England
West Wheal Jane mine, Cornwall v. England
Wet mts. v. Colorado
Wheal Badden mine, Cornwall v. England
Wheal Falmouth mine, Cornwall v. England
Wheal Hope mine, Cornwall v. England
Wheal Jane mine, Cornwall v. England
Wheal Sperries mine, Cornwall v. England
Wheal Widden mine, Cornwall v. England
Whewellite, *Ohio*, in septarian nodules, origin of, anal., X-ray, 69-609 ; *Ukrainian SSR*, in Hg and polymetallic deposits, 69-875
Whipstick mines, New South Wales v. Australia
White mt. (mts.) v. California
White Pine Co. v. Nevada
Whiteoak creek v. Tennessee
Whitlockite, from hydrolysis of brushite, 69-1191 ; in chondrites, anal., 69-3183
Wickenburg v. Arizona
Wickenburgite, *Arizona*, mineralogy, 69-1538
Wiesloch, Baden v. Germany
Wilberforce, Ontario v. Canada
Willemite, Raman spectrum, 69-3607 ; *New Jersey*, 69-2679
Willsboro v. New York
Willyamite, is cobaltian ullmannite, 69-3019
Wilson Co. v. Kansas
Windy Knoll, Derbyshire v. England
Wisconsin, magnetization of gabbro, 69-1557
Wittenoom, Western Australia v. Australia
Wittichenite, *Uzbek SSR*, 69-224
Witwatersrand, Transvaal v. South Africa
Wodginite, synthetic, 69-1197 ; *USSR*, in pegmatite, anal., X-ray, sp. gr., H., 69-1485
Wolfeite, structure, 69-1080 ; *Brittany*, in Fe ore, anal., opt., d.t.a., t.g.a., 69-3342
Wolfram, *Rwanda*, 69-3620, mined, 69-2953
Wolframite, in granite and veins, Nb and Ta in, 69-3319 ; leaching of, 69-2999 ; magnetic moment of Fe^{2+}, 69-858 ; *Australia*, Mössbauer spectra, 69-2925 ; *Cumberland*, veins, 69-2415 ; *Mozambique*, in pegmatite, H., sp.gr., X-ray, anal., trace elements, 69-581 ; *Siberia*, inclusions in, anal., 69-1135 ; *South Africa*, occurrence and reserves, 69-2940
Wolfsbachtal, Salzburg v. Austria
Wolfsberg, Harz v. Germany
Wollastonite, glass–crystal transformation, 69-1168 ; synthesis, lowest formation *T*, 69-304 ; *Alps*, structures of polymorphs, 69-2891 ; *California*, structures of polymorphs, 69-2891 ; *Ceylon*, 69-1720 ; *Japan*, X-ray photographic discrimination from para-, 69-1047 ; *Switzerland*, genesis in calc-silicate rocks, 69-2669, origin, 69-1696
Wölsendorf v. Germany
Wood, *Chaîne des Puys*, age, 69-9
Wood river–Tikchik lakes area v. Alaska
Woodbury v. New York
Woodson Co. v. Kansas
Worms Head, Carmarthenshire v. Wales
Wrangell mts. v. Alaska
Wulfenite, *Leicestershire*, in ore, 69-2665
Wurtzite, Mössbauer spectra of ^{57}Fe, 69-1037 ; thermal expansion, 69-2632
Wüstite, in system Fe–S–O, 69-3017 ; molar volume, 69-3047
Wuuluman, New South Wales v. Australia
Wyoming, absarokite–shoshonite–banakite series, 69-3430 ; bentonite, 69-1915 ; heavy minerals, 69-2547 ; ring-dyke complex, 69-3451 ; zircon age and provenance, 69-1814 ; *Aspen mt.*, alunite, 69-2539 ; *Black Hills*, calcitization of dolomite, solution breccias, 69-2540 ; *Daisy Geyser group, Yellowstone National Park*, water circulation, 69-2507 ; *Gas hills*, U isotopes, 69-2180 ; *Green River basin*, trona, halite, 69-1145 ; *N Rambler mine, Albany and Carb counties*, Pt, Cu, Ag, Au, 69-296 *Powder River basin*, ferroselite in deposit, 69-1779 ; *Shirley basin*, deposits, 69-1269

Xanthoconite, structure, 69-167
Xanthophyllite, *Japan*, X-ray, anal., I d.t.a., 69-1454 ; *Urals*, anal., X-r varieties, 69-1453
Xenoliths, age in ultramafic rocks, 69-274 *Alpes Maritimes*, plagioclase-rich; granite, 69-3370 ; *Bihar*, granitic porphyry, 69-3466 ; *Czechoslovakia*, all line basement in Tertiary breccia, 6 673 ; *France*, peridotite in pipes, 6 3524 ; *Hawaii*, garnet-bearing, in tui 2 types, 69-1665 ; *Hawaiian Is.*, basalts, mineralogy, 69-1628 ; *Iceland*, lavas, anal., 69-1652 ; *Italy*, in mon diorite, anal., opt., X-ray, 69-352 *Japan*, colours of zircons in, 69-246 *New South Wales*, in breccia pipes, isotopes in, 69-3138 ; *New Zeala* granitic in pumice, 69-707, petrolo 69-710 ; *Ontario*, quartzite in carbonati 69-2566 ; *Pamirs*, eclogite in alkal rocks, anal., 69-3568 ; *Siberia*, in eclogit mineralogy, fragments of upper mant 69-1649, in kimberlite pipe, petrolo anal., 69-1586 ; *South Africa*, eclogite kimberlite, 69-680 ; *Surtsey*, acid, an petrology, 69-1652 ; *Tristan da Cun* in lavas, anal., origin, 69-2447 ; *Vietna* in monzonite, 69-3424, in tuffs, pet graphy, 69-694
Xenon, in chondrites, 69-484, 224 radiogenic, migration in pitchblende a uraninite, 69-1372
— isotopes, in stone meteorites, 69-48 in tellurbismuth, 69-1258
Xenotime, Raman spectrum, 69-360 XRF determination of Y, 69-62 ; *Illino* in sands, 69-2550 ; *Italy*, in apatite, in, 69-3339 ; *New Zealand*, in stre sediments, 69-397
Xonotlite, stability, 69-303 ; synthesis, 1205
X-ray diffraction topography, study polytypism in SiC, 69-1954
— diffractometry, device for improv 2θ values, 69-2762 ; diffracted-be monochromator for clay minerals, 2769 ; long collimator modification, 1032 ; peak area calculator, 69-27 setting crystal on 3-circle diffractome 69-2886
— fluorescence analysis, automatic sam feed, 69-66 ; bentonite and shale, 1007 ; Br and I, 69-2802 ; Cu, Ni, Mn by portable, radioisotope analys 69-962 ; data processing by comput 69-2793 ; dilution methods, 69-62 ; fu sample preparation, 69-2794 ; hon geneity study of glass disc samp 69-961 ; K and Ca in standard rocks, fusion, 69-1880 ; major elements, fusion, 69-66 ; major elements in silic rocks, 69-960 ; matrix corrections scattered radiation, 69-67 ; MgO, 69-3 minute mineral samples, 69-959 ; porta analysers, 69-60 ; punched-card d storage, 69-42 ; quantitative Fe^{2+}, F determination, 69-2796 ; Rb/Sr ratio rocks, 69-2797 ; rocks and miner 69-2795 ; silicate rocks, La_2O_3 absorber, 69-1881 ; Si and Al in roc 69-1884 ; Sn ores *in situ*, 69-61 ; Sr

-ray (*contd.*)
internal standard, 69-1884 ; study of glass disc samples by electron probe, 69-961 ; Th in Mn ores, 69-1882 ; Y in xenotime and monazite, 69-62 ; Zr in rocks, 69-67 ; Zr in sand and concentrates, 69-63
- goniometry, of metacolloidal to crystalline pyrite, 69-249
- milliprobe, microanal. with, 69-2799
- spectrofluorimetry, anal. of silicate rocks, 69-1879
- texture-goniometry, computer programme for, 69-2768
-rays, anomalous reflections from diamond, 69-2909 ; apparatus for low *T* studies, 69-33, 930 ; automatic balanced filter device, 69-36 ; axial divergence in powder diffractometry, 69-1032 ; comprehensive law of diffraction, 69-131 ; computer programme for data processing, 69-1837 ; computer programme for diffraction corrections, 69-2882 ; computer programme for texture diffractometer data processing, 69-1839 ; concave grating spectrometer mounting, 69-65 ; determination of chlorite, 69-37 ; determinative curve for orthopyroxenes, 69-917 ; diffuse scattering identification of disordered structures, 69-1024 ; effect of electron shell structure of atoms, 69-1041 ; effects by non-ideal crystals, computer programme, 69-146 ; fibre characteristics of chrysotiles, 69-148 ; film developers and intensity measurements, 69-128 ; gibbsite, low angle maximum, 69-169 ; grading of powder specimens, 69-32 ; indexing plagioclase powder patterns, 69-1836 ; lattice parameters from equi-inclinational formulae, 69-2759 ; measurement of screw dislocations of KCl whiskers, 69-1030 ; observations of equilibria under hydrostatic pressure, 69-1164 ; optimum width of receiving slit, 69-1885 ; peak-width for equi-inclination diffraction geometry, 69-1023 ; photometric intensity measurements of single crystal photos., 69-2767 ; polaroid adapter for goniometer, 69-38 ; powder pattern indexing, 69-34 ; powder patterns from single crystals, 69-2760, 2761 ; precession photographs, computer programme for intensity corrections, 69-2758 ; profiles for non-ideal crystals, 69-146 ; punched-card storage of data, 69-42 ; quantitative anal., of mixtures, 69-39 ; reflections for cell parameter determinations, 69-2883 ; Sawada circle, spectrometer geometry, 69-65 ; simple method of setting up single crystals, 69-931 ; single crystal photographs, photometric intensities, 69-2887 ; single crystals, apparatus for high *T* study, 69-2770 ; slit collimator and beam trap for powder camera, 69-1903 ; small angle scattering, 69-81 ; study of bentonite and shale, 69-1007 ; study of surface layers of silicates, 69-836 ; systematic indexing of powder patterns, 69-1840 ; teaching model for Bragg equation, 69-2764 ; Weissenberg, correction for deformation effect, 69-2766 ; Weissenberg double slit technique, 69-2763

agiite, compared with psumilite and merrihueite, 69-2392 ; in Colomera meteorite, anal., X-ray, 69-2392
akovlev, Kursk v. Russian SFSR
Yakutia, Siberia v. Russian SFSR
Yamanashi, Honshu v. Japan
Yamatoite, *Japan*, 69-1096
Yampi, Western Australia v. Australia
Yampire, Western Australia v. Australia
Yanysharsk bay, Crimea v. Ukrainian SSR
Yavapai Co. v. Arizona
Yellow Pine v. Idaho
Yellowstone National Park v. Wyoming
Yellowstone plateau v. United States
Yenisey v. Enisei
Yeravna, Siberia v. Russian SFSR
Ylöjärvi v. Finland
Yongyang basin v. Korea
Yonne v. France
York river, Ontario v. Canada
Yorkshire v. England
Yosemite National Park v. California
Youssef v. Tunisia
Ytterbium, neutron activation anal. in rocks, 69-69 ; *New Zealand*, in stream sediments, 69-397
Yttrialite, synthesis, 69-2105 ; *Texas*, metamict recrystallized, 69-2105
Yttrium, accumulation by marine organisms, 69-2199 ; concentrated in igneous rocks, 69-3070 ; in hornblende and plagioclase in granite, 69-378 ; in pyrochlore, 69-2378 ; in spencite, 69-1427 ; *Germany*, in basaltic rocks, 69-1304 ; *Mexico*, in apatite, 69-2370 ; *New Zealand*, in augites, hornblendes and hypersthenes, 69-3083, in stream sediments, 69-397 ; *Queensland*, in bentonite, anal., 69-111
— compounds, oxide, XRF anal., 69-62
Yttrofluorite, *Norway*, in pegmatite, chem., opt., X-ray, 69-1486, is cerfluorite-yttrocerite, 69-1486
Yugawaralite, anal., opt., 69-2326 ; *Honshu*, from borehole, chem. formula, X-ray, 69-2327
YUGOSLAVIA, *Allchar*, allcharite, goethite, 69-2337, raguinite, 69-2382, 3326, vrbaite, 69-2354 ; *Mežica*, Zn exploration, 69-1392 ; *Serbia*, kaolinite and halloysite, 69-1019 ; *Slatina, Teslić, Bosnia*, halloysite and kaolinite, 69-1019
Yukon v. Canada
Yukon-Tanana upland v. Alaska

Zacatecas v. Mexico
Zaccon, Valsugana v. Italy
Zagadochnaya, Siberia v. Russian SFSR
Zambezi valley v. Zambia
Zambezia v. Mozambique
ZAMBIA, *Chinyunu*, basement complex, mineral occurrences, 69-1589 ; *Leopards hill*, geology, 69-1590 ; *Zambezi valley*, geology, 69-1590
Zapachilsa, Stara-Planina v. Bulgaria
Zarandah v. Nigeria
Zareby v. Poland
Zarehchouran mine, Afshar v. Iran
Zarehshuran v. Zarehchouran
Zawar v. India
Zawidów v. Poland
Zechstein basin v. Germany
Zeolites, cation selectivity, 69-1233 ; hydrothermal synthesis, 69-1239 ; hydroxyl groups in catalysts, 69-1992 ; selective exchange of cation sites, 69-1036 ; spectra of synthetic containing transition metal ions, 69-1035 ; structure of synthetic L, 69-2906 ; synthetic, reflectance spectra of Ni^{2+} ions, 69-1237 ; *T* and intensity of OH vibration bands, 69-2885 ; unit cell size and Cs loading, 69-1234 ; *California*, authigenesis in tuffs, 69-2554, in altered tuffs, 69-788, in tuffaceous rocks, 69-2319 ; *Cornwall*, in gabbro, origin, 69-2666 ; *Italy*, in tuff, opt., d.t.a., X-ray, 69-3388, Rb and K in, 69-1293 ; *Kazakh SSR*, in sedimentary rocks, origin, 69-2321 ; *Nevada test site*, genesis, 69-2816 ; *Sicily*, in basalts, 69-2427 ; *South Africa*, in eclogite xenolith, 69-680
Zeolitization, during serpentinization, 69-796
Zeravshan-Gissar mts. v. USSR
Zeunerite, meta-, polarisations of electronic spectra, 69-2648
Zhob valley, West Pakistan v. Pakistan
Zillertal Alps v. Austria
Zinc, assay, 69-60 ; concentrated in tree tissue, 69-2222 ; determination in cement by atomic absorption, 69-1876 ; high in biotites, 69-3269 ; in chondrites, 69-2235 ; in iron meteorites, 69-2236 ; in leached zone below Kupferschiefer, 69-1337 ; in synthetic tourmaline, 69-340 ; in USGS standard rocks, 69-3160 ; loss in hydrothermal alteration, 69-375 ; rapid determination in Fe-ores by atomic absorption, 69-1875 ; *Alaska*, anomalous in quartz vein, 69-1262, in sediments, 69-463, suggested prospecting area, 69-197 ; *Arizona*, 69-2223 ; *Canada*, in pyrite, 69-1499 ; *Colorado*, in magnetite, 69-1481, in stream-water, 69-3156 ; *Czechoslovakia*, in pyrite, 69-2144 ; *Derbyshire*, brine as mineralization source, 69-1143 ; *Europe*, in Zechstein deposits, 69-415 ; *Finland*, in chromite, 69-2333 ; *France*, in shales, 69-407 ; *Illinois*, in magnetite, 69-1481 ; *Indian Ocean*, in sediments, 69-2174 ; *Montana*, in magnetite, 69-1481 ; *Nevada*, 69-265, 462, 2226 ; *New Mexico*, 69-2228, in magnetite, 69-1481 ; *New Zealand*, in waters, 69-441 ; *North Carolina*, in magnetite, 69-1481 ; *Northern Territory*, exploration, 69-461 ; *Pacific Ocean*, in water from cores, 69-1320 ; *Pennines*, mineralization, 69-1099 ; *Romania*, distribution in volcanites, 69-1307, in ore, 69-1261 ; *Sardinia*, mineralization, 69-1099 ; *Taupo*, in thermal waters, 69-441 ; *Tennessee*, abundance correlated with stratigraphic thickness, 69-2020 ; *Tunisia*, in marls and limestones, 69-3117 ; *Urals*, in Cu deposit, anal., 69-353 ; *USA*, in sea-water, 69-2200 ; *Utah*, distribution, 69-1120
— compounds, ferrite, cation distribution by neutron diffraction, 69-172 ; germanates, high-*P* transformations, 69-2114 ; hydroxychloride, structure, 69-1055 ; $Na_4ZnCd[Si_2O_6]_2$, structure, comp., 69-1983 ; oxide, sintering of, 69-3037 ; selenide, absolute polarity, 69-132 ; silicates, high *P* transformations, 69-2114 ; sulphide, new polytypes, 69-165 ; sulphide, polytype formation in crystals by periodic slip, 69-166 ; $ZnSn(OH)_6$, structure, 69-1069
— ores, *Alaska*, 69-260, 2977 ; *Germany*, 69-2970 ; *Urals*, contact metamorphic deposit, 69-216
— -Cu-Pb ores, *Cumberland*, 69-2415 ; *Czechoslovakia*, 69-248 ; *Japan*, with pyrite and baryte, 69-245
— -Pb ores, *Broken Hill*, quantitative chemical model, anal., 69-240 ; *Greece*, 69-238 ; *Norway*, 69-244 ; *Siberia*, 69-235 ; *Spain*, two stages of mineralization, 69-1107 ; *Tunisia*, 69-1108 ; *USA*, wall

Zinc (*contd.*)
rock enrichment of common elements, 69-2142 ; *Vietnam*, 69-237
— -Pb-Ag ores, *Alaska*, 69-236 ; *Ireland*, anal., 69-234 ; *Northern Territory*, in tuffaceous shales, anal., 69-239
— -Pb-pyrite ores, *Czechoslovakia*, anal. of main minerals, 69-246
Zincite, crystallization kinetics, 69-3025
Zinckenite, diagnostic features, 69-3330 ; *Germany*, anal., 69-1492 ; *Massif Central*, 69-2959
Zinkenite *v.* Zinckenite
Zinnwaldite, 2 stages of decrepitation, 69-1449
Zircon, particle size anal., 69-31 ; Raman spectrum, 69-3607 ; *Alps*, age, 69-15 ; *Azov*, in granitoids, types, 69-2256 ; *Brazil*, 69-1114 ; *Burma*, in river sediments, 69-2533 ; *California*, age, in augen gneiss, 69-913 ; *East Pakistan*, in beach placers, 69-2009 ; *Illinois*, in sands, 69-2550 ; *India*, 2 types in granite, origin, 69-3419 ; *Italy*, in granites, mineralogy, 69-2257, morphology and age of granites, 69-1809 ; *Japan*, age indicator of volcanic rocks, 69-2463, in granitic xenoliths, colour changes with heat, 69-2463 ; *Mozambique*, Hf in, sp. gr., opt., X-ray, 69-1409 ; *Nevada*, in granitoid rocks, minor elements in, properties, ages, 69-3204, in stream sediments, 69-2545 ; *Ontario*, 69-1774, in conglomerate, age, 69-903 ; *Orange Free State*, in conglomerates, morphology, radioactivity, 69-2255 ; *Quebec*, in bentonite, 69-1943 ; *South Africa*, occurrence and reserves, 69-2940 ; *Taiwan*, morphology and provenance, 69-777 ; *Vishnevye mts.*, e.p.r. spectra, 69-857 ; *Wyoming*, sedimentary, age as guide to provenance, 69-1814
Zirconium, determination in rutile with alizarin red-S, 69-953 ; in extrusive rocks, 69-1642 ; in standard rocks, 69-3161 ; neutron activation anal., 69-2804 ; salinity indicator in clays, 69-395 ; XRF anal. in rocks, 69-67 ; XRF anal. in sand and concentrates, 69-63 ; *Black Sea*, in Fe-Mn concretions, 69-3134 ; *Germany*, in granites, 69-1279 ; *Italy*, in alkali-potassic volcanoes, 69-3461 ; *Norway*, i thortveitite, 69-3221 ; *Pennsylvania* variation in diabase-granophyre suite 69-382 ; *Queensland*, in bentonite, anal 69-111 ; *St. Kitts*, in lavas, 69-724 *Skaergaard*, in intrusion, 69-2161 ; *Tas mania*, variation in diabase-granophyr suite, 69-382
— compounds, oxide, high-*P* modification X-ray, density, 69-1183 ; *Siberia*, zi conosilicates, 69-876
Zlaté Hory, Jeseník mts. v. Czechoslovakia
Zoisite, *Massachusetts*, structure cf. clino 69-1981 ; *Spain*, zoned in eclogite, opt 69-3217 ; *Tanzania*, 69-321, opt., anal sp. gr., H., 69-320, gem, anal., opt colour due to V, 69-3066
Zoning, convolute, in plagioclase, 69-623 in cassiterite, origin, 69-1479
Zovencedo, Vicenza v. Italy
Žulová v. Czechoslovakia
Zululand, Natal v. South Africa
Zunyite, *Morocco*, X-ray, 69-1423
Zussmanite, structure, 69-1049
Zwieselite, *Bavaria*, 69-3391

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